REVISION HISTORY AG-3E CHASSIS

MODEL

KV-EX29M61

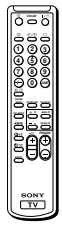
PART NO.: 9-872-267-01

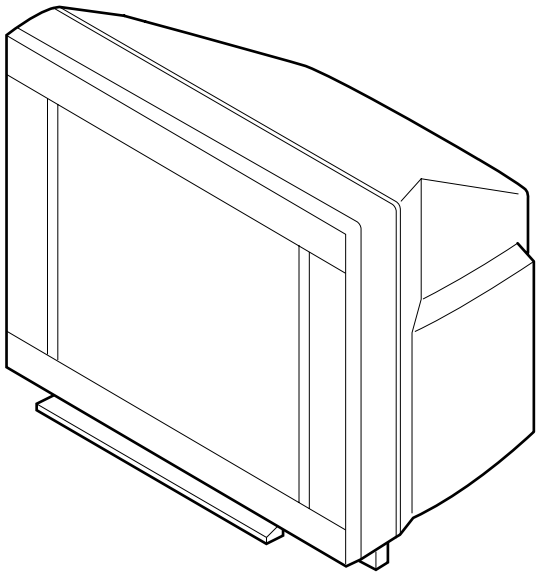
NO	DATE	DESCRIPTION OF REVISION

Self Diagnosis
Supported model

SERVICE MANUAL AG-3E CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-EX29M61	RM-964	Singapore	SCC-U37B-A				





TRINITRON ® COLOR TV

SONY ®

SPECIFICATIONS

		Note
Power requirements	110-240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of the TV	
Television system	B/G, I, D/K, M	
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I, D/K; A2 Stereo/Bilingual B/G	
Teletext Language	English, Arabic, French	
Channel coverage		
B/G	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41	
I	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41	
D/K	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 CATV: S01 to S03, S1 to S41, Z1 to Z39	
M	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84	
(Antenna)	75-ohm external terminal	
Audio output (Speaker)	8W + 8W	
Number of terminal		
(Video)	Input: 4 Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms
♪ (Audio)	Input: 4 Output: 1	Phono jacks; 500 mVrms
(S Video)	Input: 2	Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
(Component Video)	Input: 1	Phono jacks; Y : 1 Vp-p, 75 ohms, sync negative C_B : 0.7 Vp-p, 75 ohms C_R : 0.7 Vp-p, 75 ohms Audio : 500 mVrms
(Headphones)	Output: 1	Stereo minijack
Picture tube	29 inch	
Tube size (cm)	72	Measured diagonally
Screen size (cm)	68	Measured diagonally
Dimension (w/h/d, mm)	772 x 576 x 516	
Mass (kg)	51	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

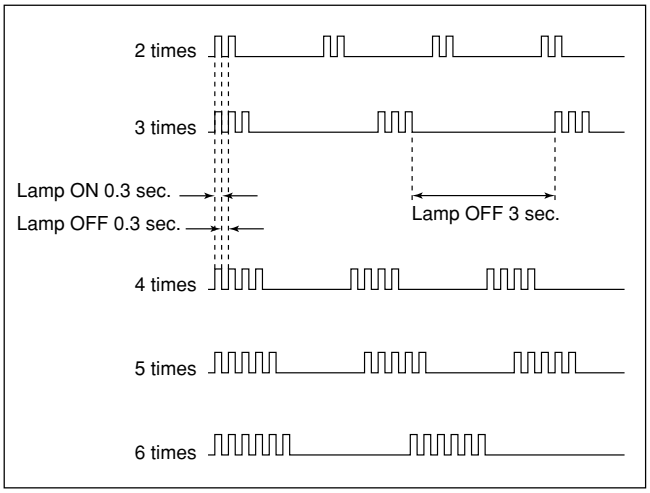
When an error occurs, the STANDBY/TIMER lamp will flash a number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F1601 (F1 Board)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP)	2 times	002:000 or 002:001~255	• H.OUT Q6807 is shorted. • H.IN Q6810 is shorted. (D board)	• Power does not come on. • Load on power line is shorted.
• +B overvoltage (OVP)	3 times	003:000 or 003:001~255	• PH 6602 faulty. • 10.5V is not supplied. (D board)	• Power does not come on.
• Vertical deflection failure	4 times	004:000 or 004:001~255	• V.OUT IC6800 faulty D6816 faulty D6817 faulty D6824 faulty R6852 open R6851 open (D board)	• Vertical deflection pulse is stopped. • Vertical size is too small. • Vertical deflection stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~255	• G2 is improperly adjusted. (Note 2) • CRT problem. • Video OUT IC9001, 9002, 9003 are faulty. (C board) • IC8306 (A board) and IC4301 (A board) are faulty.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• Horizontal deflection failure	6 times	006:000 or 006:001~225	• C6831 is open circuit. (D board)	• H pulse output is too high.
• Micro reset	—	101:00 or 101:001~225	• CRT Discharge (C Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

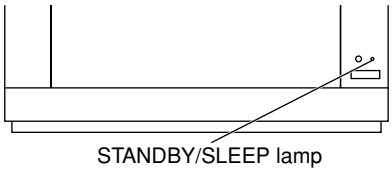
Note 1: Refer to screen (G2) Adjustment in section 6-5 of this manual.

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent	2 times
+B overvoltage	3 times
V deflection stop	4 times
White balance failure	5 times
Horizontal Deflection Failure	6 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

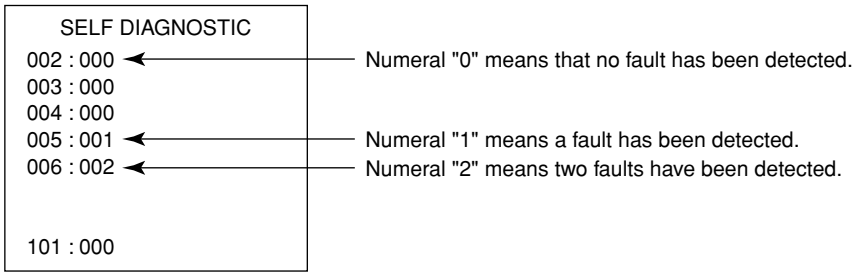
[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON

⇧

Note that this differs from entering the service mode (mode volume +).

Self-Diagnosis screen display


SELF DIAGNOSTIC
002 : 000
003 : 000
004 : 000
005 : 001
006 : 002
101 : 000
Numeral "0" means that no fault has been detected.
Numeral "1" means a fault has been detected.
Numeral "2" means two faults have been detected.

5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

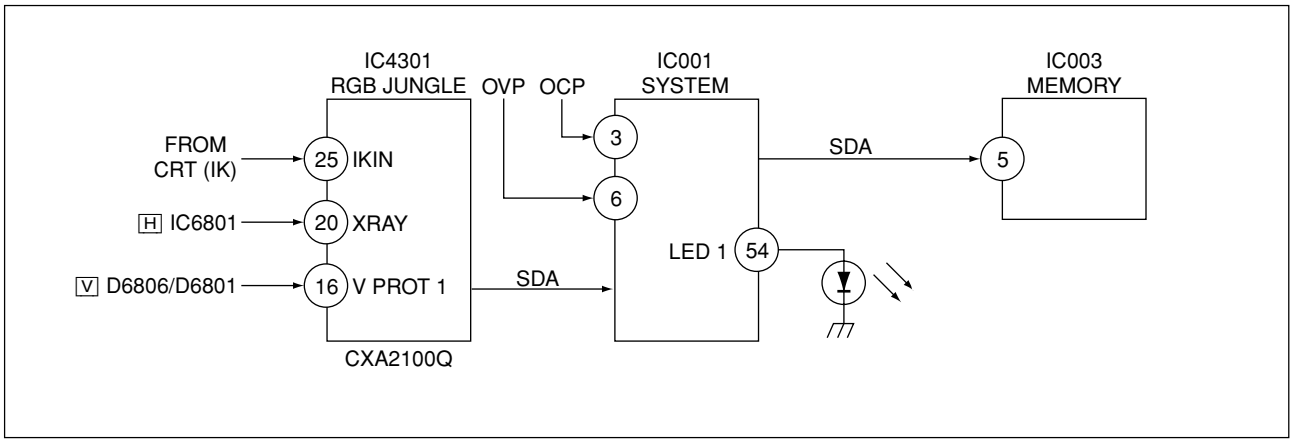
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT

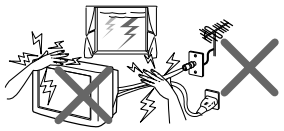


[+B overcurrent (OCP)]	Occurs when an overcurrent on the +B(135) line is detected by Q6610 and Q6609. If Q6610 and Q6609 go to ON, the voltage to the pin3 of IC001 go to UP. The unit will automatically turn off.
[+B overvoltage (OVP)]	Occurs when an overvoltage on the +B(135) line is detected by D6635, Q6611 and Q6612. If Q6611 and Q6612 go to ON, the voltage to pin6 of IC001 go to UP. The unit will automatically turn off.
[Vertical deflection failure]	Occurs when an absence of the vertical deflection pulse is detected by Q6811, Q6819, Q6820, Q6821 and D6801. Shut down the power supply.
[White balance failure]	If the RGB levels do not balance or become low level within 5 seconds. This error will be detected by IC4301. TV will stay on, but there will be no picture.
[High voltage protector of Horizontal Deflection]	Occurs when an overvoltage of horizontal pulse is detected by D6809 and IC6801. If the voltage of 7 pin of IC6801 goes to High, the voltage to pin20 of IC4301 go to UP. The unit will automatically turn off.

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

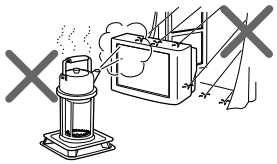
WARNING

- Dangerously high voltages are present inside the TV.
- TV operating voltage: 110 – 240 V AC.

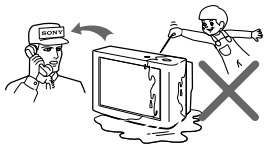


For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

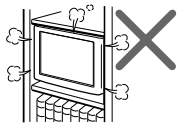
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



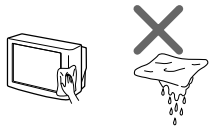
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



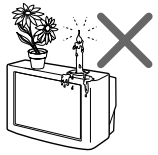
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



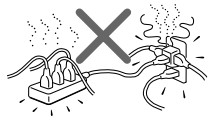
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



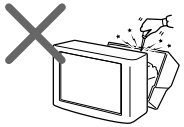
Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.



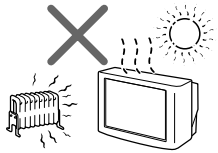
Do not place any objects on the TV.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.



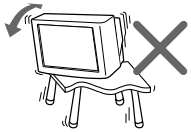
Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.



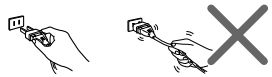
Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

SECTION 1
GENERAL

WARNING (continued)



Install the TV on a stable TV stand and floor which can support the TV set weight. Ensure that the TV stand surface is flat and its area is larger than the bottom area of the TV.



Pull the power cord out by the plug. Do not pull the power cord itself. Even if your TV is turned off, it is still connected to the AC power source (mains) as long as the power cord is plugged in. Unplug the TV before moving it or if you are not going to use it for several days.

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RM-964

Getting Started

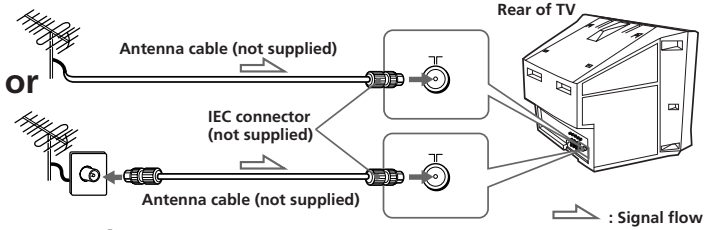
CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

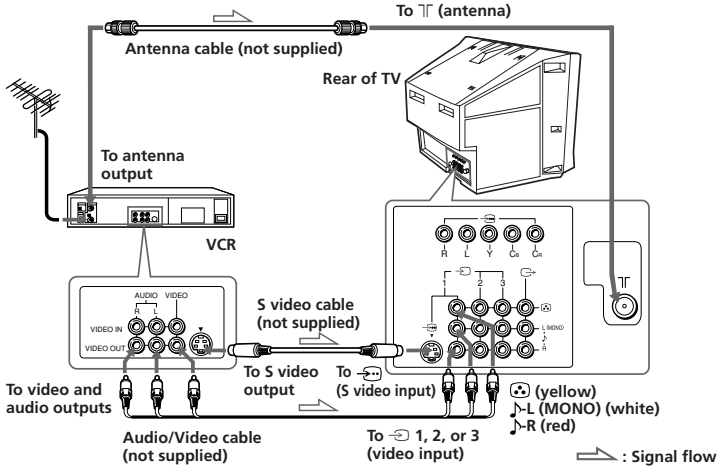
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press ⊖ (see page 12).

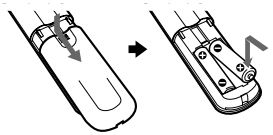


Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the ⊤ (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- When both the ⊖ (S video input) and ⊖ 1 (video input) are connected, the ⊖ (S video input) is automatically selected. To view the video input to ⊖ 1 (video input), disconnect the S video cable.
- When no signal is input from the connected video equipment, the TV screen becomes blue.

Step 2

Insert the batteries into the remote

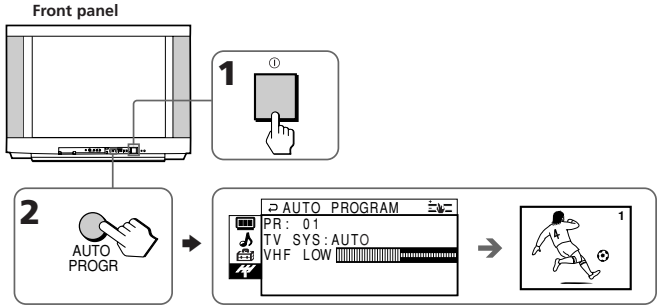


Note

- Do not use old batteries or different types of batteries together.

Step 3

Preset the channels automatically



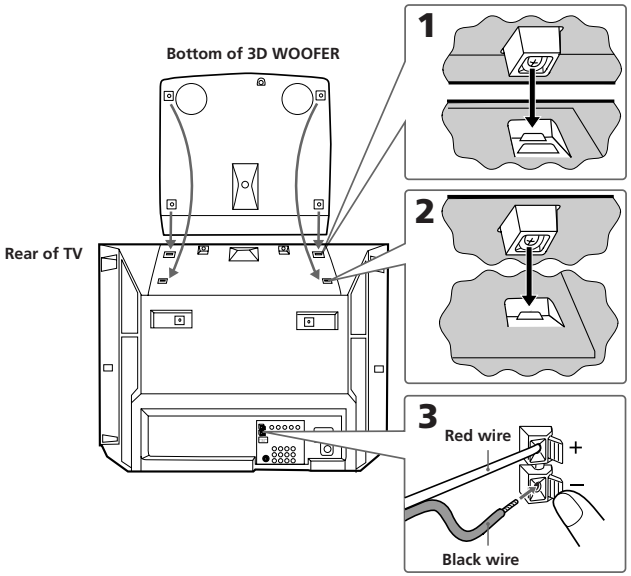
Tips

- To stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 33).

Connecting the 3D WOOFER

(Not used for this model)

You can enjoy high quality sound by connecting the 3D WOOFER.



1 Place the foot at the front of the 3D WOOFER into the footholds on the top of your TV.

2 Place the foot at the rear of the 3D WOOFER into the footholds at the rear of your TV.

3 Connect the wires to the 3D WOOFER (4Ω) terminals at the rear of your TV. The red wire should be connected to the ⊕ red terminal and the black wire to the ⊖ black terminal.

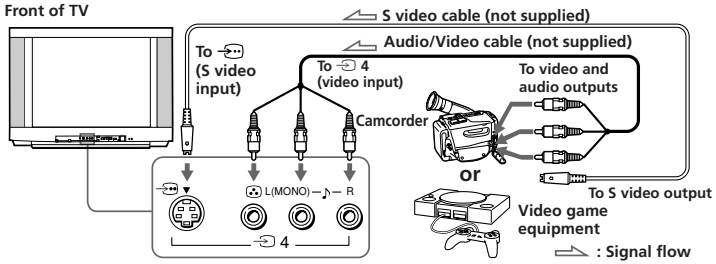
Notes

- Connect only the supplied 3D WOOFER; otherwise your TV may malfunction.
- Unplug your TV from the wall outlet when connecting the 3D WOOFER.
- To prevent a malfunction caused by a short circuit of the terminals, make sure that none of the 3D WOOFER wire strands stick out, making contact with it's neighbouring 3D WOOFER terminal.

Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, camcorder, video game, or stereo system. To watch the picture from the connected equipment, see page 12.

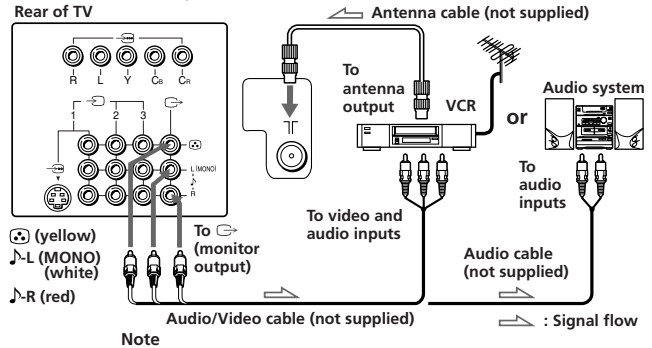
Connecting a camcorder/video game equipment using the ⇨ (video input) jacks



Notes

- When connecting video game equipment, display the "PICTURE" menu and select "ON" for "GAME MODE" to adjust the picture setting that is suitable for video games (see page 26).
- You can also connect video equipment to the ⇨ 1, 2, or 3 (video input) jacks at the rear of your TV.
- When both the ⇨ (S video input) and ⇨ 4 (video input) are connected, the ⇨ (S video input) is automatically selected. To view the video input to ⇨ 4 (video input), disconnect the S video cable.

Connecting audio/video equipment using the ⇦ (monitor output) jacks



Note

- If you select "DVD" on your TV screen, no signal will be output at the ⇦ (monitor output) jacks (see page 12).

continued

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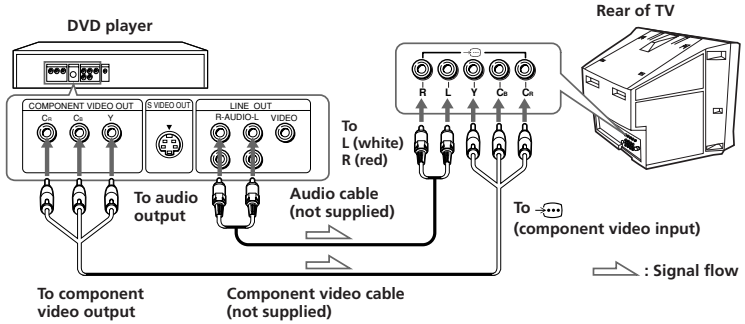
Connecting optional components (continued)

Connecting a DVD player to (component video input)

1 Using an audio cable, connect R and L under (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.
2 Using a component video cable, connect Y, C_B, and C_R under (component video input) on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.
3 Press on the remote or the TV until "DVD" appears on the screen.



Notes

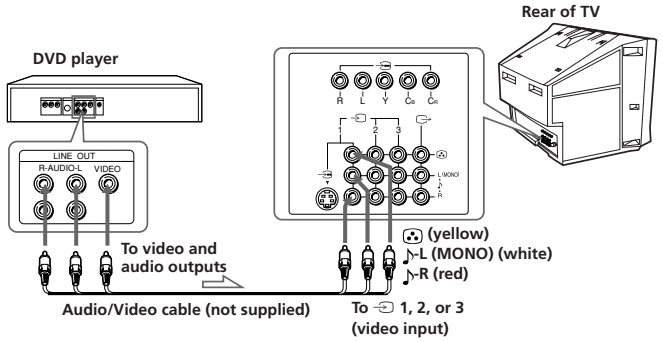
- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- When connecting to (component video input) on your TV, you must connect Y, C_B, and C_R to receive the video signals, and connect L and R to receive analog audio signals.

Connecting a DVD player to (video input)

Connect 1, 2, or 3 (video input) ♪/ (audio/video) connectors on your TV to LINE OUT on your DVD player.



Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 27).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

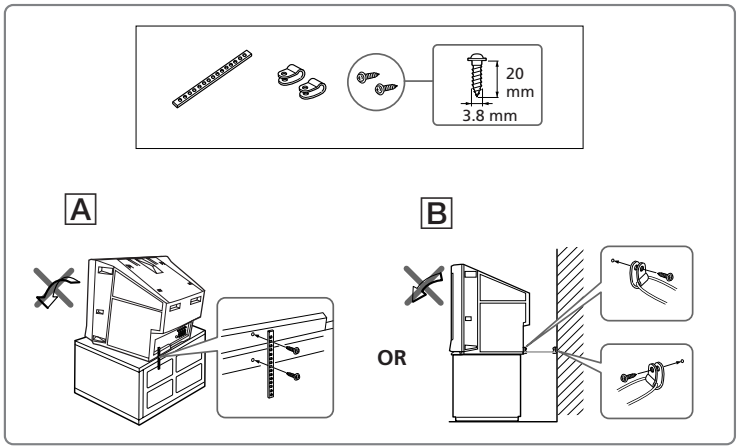
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A With the supplied screws, attach the stabilizer band to the TV stand and to the rear of the TV using the provided hole.

OR

B Put the cord or chain through the clamps to secure the TV against a wall or pillar.

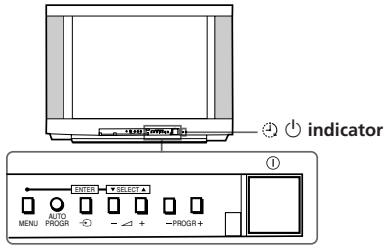


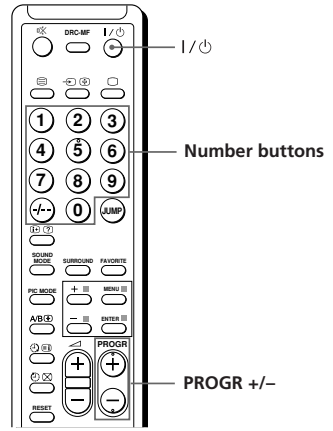
Note

- Use only the supplied screws. Use of other screws may damage the TV.

Watching the TV

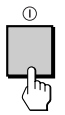
This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.





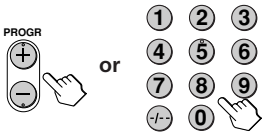
1 Press ⏻ to turn on the TV.

When the TV is in standby mode (the ⏻ indicator on the TV is lit red), press I/⏻ on the remote or PROGR +/– on the TV.



2 Press PROGR +/– or the number buttons to select the TV channel.

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



Note

- When you turn on the TV, either the program number or video mode is displayed for approximately 40 seconds. The ECO MODE (ECO) icon will also appear if "ECO MODE " in the "SETUP" menu is set "ON" (see page 30).

To select a TV program quickly

(1) Press and hold PROGR +/–.
(2) Release PROGR +/– when the desired program number appears.

Note

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

continued

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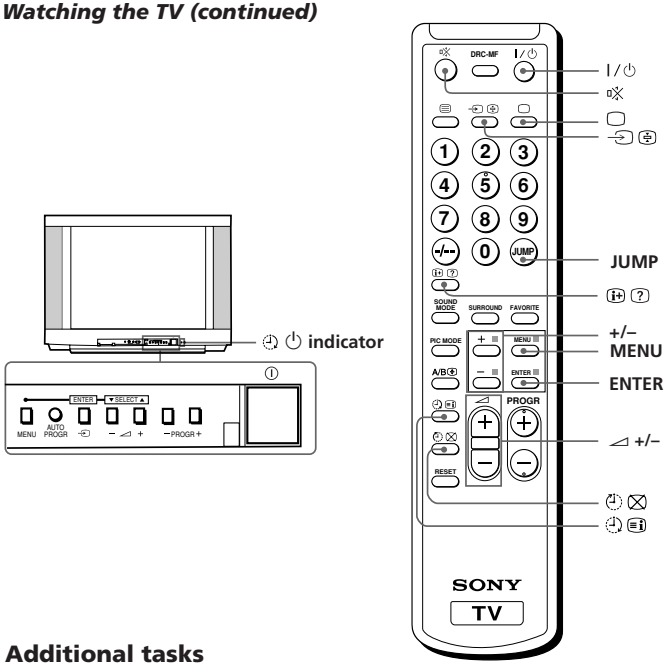
Watching the TV (continued)



Additional tasks

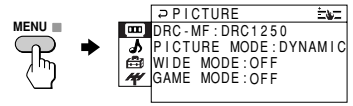
To	Press
Turn off temporarily	I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	+/–.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	⏎ (or ⏎ on the TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4"or "DVD". To return to the TV screen, press ▢ (or ⏎ on the TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	ⓘ.

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

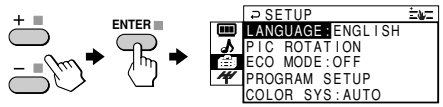
Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see **Introducing the menu system** on page 23.

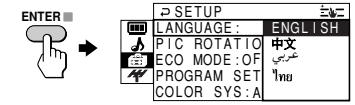
1 Press MENU.



2 Press + or – to select 🧰, then press ENTER.

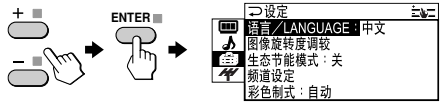


3 Make sure "LANGUAGE" is selected then press ENTER.



4 Press + or – to select the desired language (e.g.,"**中文**"), then press ENTER.

The selected menu language appears.



To return to the normal screen

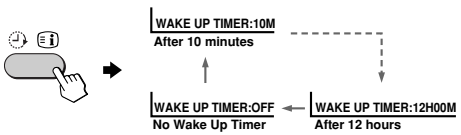
Press MENU.

continued

Setting the Wake Up timer

1 Press ⏲ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the TV channel or video mode you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the TV to turn off automatically.
The ⏲ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ⏲ until "WAKE UP TIMER: OFF" appears, or turn off the TV's main power.

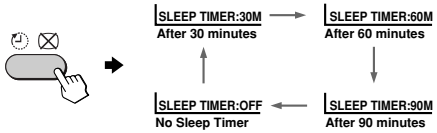
Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode. To resume watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press ⏲ until the desired period of time appears.

The Sleep timer starts immediately after you have set it.

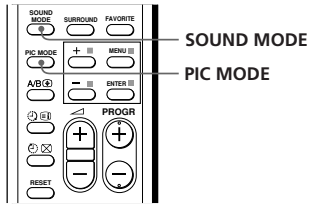


To cancel the Sleep timer

Press ⏲ until "SLEEP TIMER: OFF" appears, or turn the TV off.

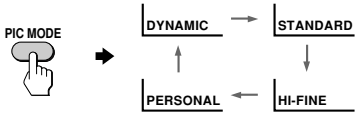
Selecting the picture and sound modes

You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.



Selecting the picture mode

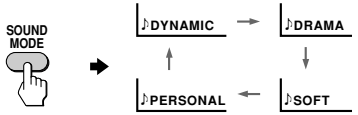
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"HI-FINE"	receive higher resolution pictures with mild contrast.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 27).

Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.



Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "SOUND" menu (see page 29).

Tip

- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 26 and **Changing the "SOUND" setting** on page 28).

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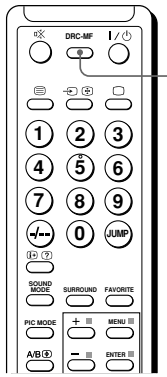
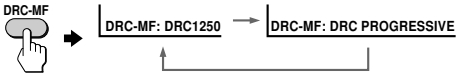
Viewing higher quality pictures

— "DRC-MF"

The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your TV. You can select "DRC1250" to watch super real (higher resolution) pictures, or "DRC PROGRESSIVE" to reduce any jittering on the screen if necessary.



Press DRC-MF repeatedly until you receive the desired picture quality.



Select	To
"DRC1250"	select higher resolution pictures.
"DRC PROGRESSIVE"	reduce jitter of any small areas or scanning lines (e.g., letters or the edge of objects) on the screen.

Tips

- You can also select the DRC-MF option using the menu (see **Changing the "PICTURE" setting** on page 26).
- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "PICTURE" menu and select "ADJUST" in "PICTURE MODE", then adjust "SHARP" to reduce the sharpness (see page 27).

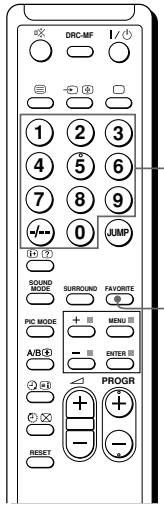
Note

- The DRC-MF mode is not selectable when the "GAME MODE" is turned "ON".

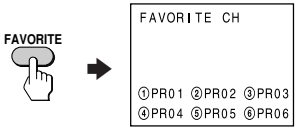
The DRC-MF logo (DRC-MF Digital Reality Creation) and "DRC-MF" are trademarks of Sony Corporation.

Viewing your favorite channels

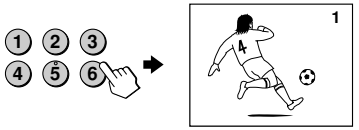
You can display and select six of your favorite channels directly from your TV screen.



1 Press FAVORITE.



2 Press the number button from 1 to 6 to select the desired channel.

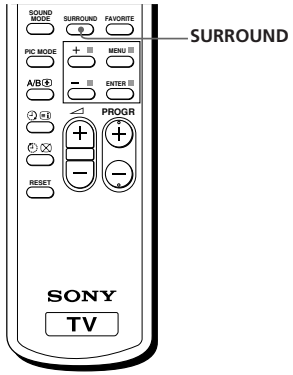


Tip

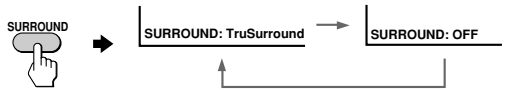
- To program your favorite channels, see **Adjusting each channel settings (PROGRAM SETUP)** on page 31.

Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

Tip

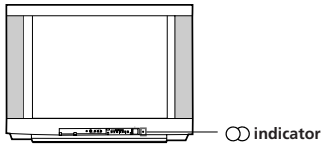
- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 28).

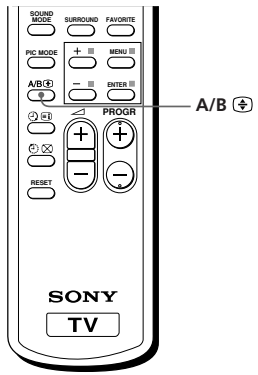
The surround of your TV is categorized as TruSurround.

TruSurround™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

Enjoying stereo or bilingual programs

You can enjoy stereo sound or bilingual programs of NICAM and A2 stereo systems.

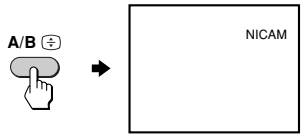




Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound.

The ◌◌ indicator on the TV lights up red when receiving any stereo or bilingual program.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)

continued

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Enjoying stereo or bilingual programs (continued)

When receiving an A2 program

Broadcasting	On-screen display (Selected sound)
A2 stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Receiving area for NICAM and A2 programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.

If the sound is distorted when receiving a monaural program through the ⅂ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

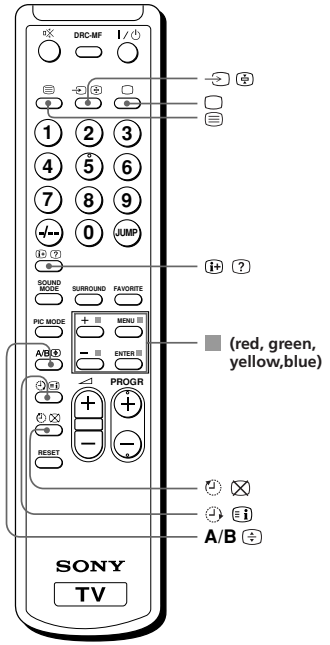
MONO → AUTO

Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the TV is in the "MONO" setting. Normally, set the TV to "AUTO".

Viewing Teletext

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

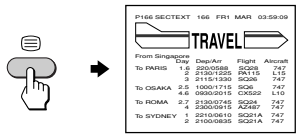


Displaying Teletext

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press ☰ to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100" is displayed at the top left corner of the screen.



To turn off Teletext

Press 🖵.

continued

Viewing teletext (continued)

Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press ☰. Each time you press ☰, the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press ⓘ. An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/–.
hold (pause) a Teletext display	Press ⏸ to display the symbol "⏸" at the top left corner of the screen. To resume normal Teletext viewing, press ⏸ or ☰.
reveal concealed information (e.g., an answer to a quiz)	Press ?. To conceal the information, press the button again.
enlarge the Teletext display	Press ⊕. Each time you press ⊕, the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press ⊠. 2 When the page number is displayed, press ☰ to show the text.

* You can also select a Teletext page that appears in the colored columns at the bottom of the screen using the corresponding color-coded buttons on the remote.

Using FASTEXT

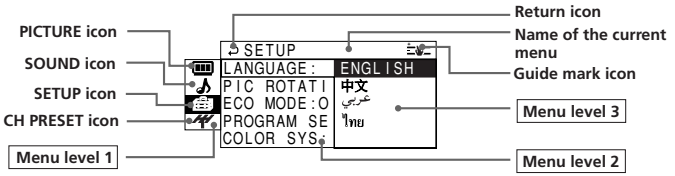
This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red ■, green ■, yellow ■, and blue ■).

To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. The following is an overview of the menu system.



Level 1	Level 2	Level 3/Function
"PICTURE"	"DRC-MF"	Select the "DRC-MF" mode: "DRC1250" → "PROGRESSIVE"
	"PICTURE MODE"	Select the picture mode: "DYNAMIC" → "STANDARD" → "HI-FINE" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"WIDE MODE"	Change the picture size.
	"GAME MODE"	Adjust the picture settings for video games.
"SOUND"	"SOUND MODE"	Select the sound mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE" → "BBE"*
	"SURROUND"	Select the "SURROUND" mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.

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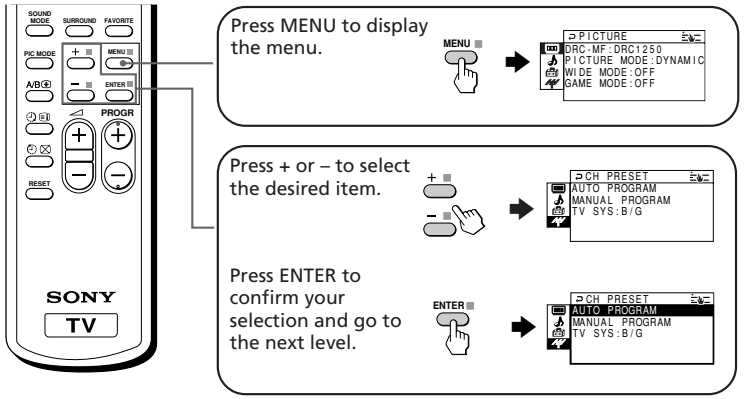
Level 1	Level 2	Level 3/Function
"SETUP"	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文"(Chinese) → "عربي"(Arabic) → "ไทย" (Thai)
	"PIC ROTATION"	Adjust the picture position.
	"ECO MODE"	Reduce power consumption of your TV.
	"PROGRAM SETUP"	Adjust each channel settings.
	"COLOR SYS"	Select the color system: "AUTO" →" PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
"CH PRESET"	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"TV SYS"	Select the TV system: "B/G" → "I" → "D/K" → "M"

* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

How to use the menu



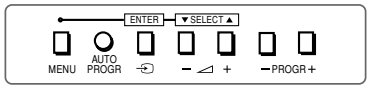
Other menu operations

To	Press
Adjust the setting value	+ or –.
Return to the previous menu level	ENTER.
Cancel the menu	MENU.

Tips

- If you want to exit from Menu level 2 to Menu level 1, press + or – until the return icon (↩) is highlighted, then press ENTER.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, ENTER, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

Front of TV

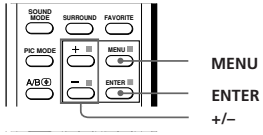


Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

Changing the “PICTURE” setting

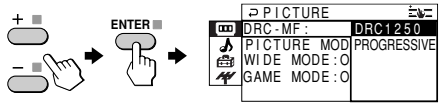
The “PICTURE” menu allows you to adjust the picture settings.



1 Press MENU.

2 Make sure the “PICTURE” icon ( ) is selected, then press ENTER.

3 Press + or – to select the desired item (e.g., “DRC-MF”), then press ENTER.



Select	To
“DRC-MF”	choose either “DRC1250” or “PROGRESSIVE”.
“PICTURE MODE”	choose either “DYNAMIC”, “STANDARD”, “HI-FINE”, “PERSONAL”*, or “ADJUST”.
“WIDE MODE”	change the picture size when receiving wide-mode (16:9) picture signal. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.
“GAME MODE”	adjust the picture setting that is suitable to view video games. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.

* When the “PERSONAL” mode is selected, you can receive the last adjusted picture settings from the “ADJUST” option (see page 27).

Notes

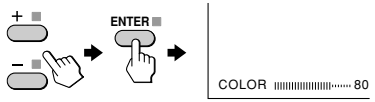
- For details on the options under “DRC-MF” and “PICTURE MODE”, see pages 16 and 15 respectively.
- “GAME MODE” is available only when receiving signals through the (video input), (S video input), or (component video input) jacks at the front and rear of your TV.

To return to the normal screen

Press MENU.

Adjusting the “ADJUST” items under “PICTURE MODE”

1 Press + or – to select the desired item (e.g.,“COLOR”), then press ENTER.



2 Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
“PICTURE”	decrease picture contrast	increase picture contrast
“COLOR”	decrease color intensity	increase color intensity
“BRIGHT”	darken the picture	brighten the picture
“HUE”*	increase red picture tones	increase green picture tones
“SHARP”	soften the picture	sharpen the picture

* You can adjust “HUE” for the NTSC color system only.

3 Repeat the above steps to adjust other items.

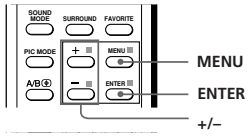
The adjusted settings will be received when you select “PERSONAL”.

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 23.

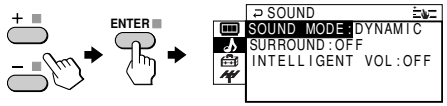
Changing the "SOUND" setting

The "SOUND" menu allows you to adjust the sound settings.

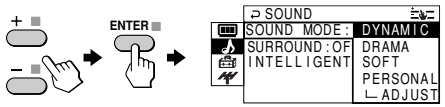


1 Press MENU.

2 Press + or – to select the "SOUND" icon (♪), then press ENTER.



3 Press + or – to select the desired item (e.g., "SOUND MODE"), then press ENTER.



Select	To
"SOUND MODE"	choose either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	choose either "TruSurround" or "OFF".
"INTELLIGENT VOL"	adjust the volume of all TV programs and video inputs automatically. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted sound settings from the "ADJUST" option (see page 29).

Note

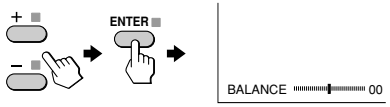
- For details on the options under "SOUND MODE" and "SURROUND", see pages 15 and 18 respectively.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "SOUND MODE"

1 Press + or – to select the desired item (e.g., "BALANCE"), then press ENTER.



2 Adjust the value according to the following table, then press ENTER .

For	Press – to	Press + to
"BASS"	decrease the bass	increase the bass.
"TREBLE"	decrease the treble	increase the treble.
"BALANCE"	increase the left speaker's volume	increase the right speaker's volume.
"BBE"	select "HIGH" for higher enhancement of sound clarity; select "LOW" for lower enhancement of sound clarity; select "OFF" to turn off the BBE sound.	

3 Repeat the above steps to adjust other items.

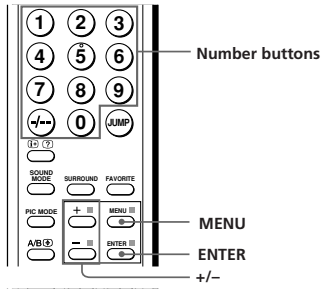
The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 23.

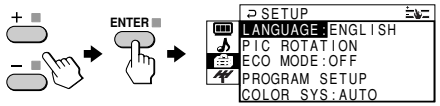
Changing the “SETUP” setting

The “SETUP” menu allows you to change the menu language, adjust the picture position, reduce your TV power consumption, setup your programs and select the color system.

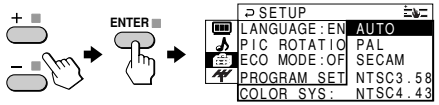


1 Press MENU.

2 Press + or – to select the “SETUP” icon (), then press ENTER.



3 Press + or – to select the desired item (e.g., “COLOR SYS”), then press ENTER.



Select	To
“LANGUAGE”	change the menu language (see **Changing the menu language** on page 13).
“PIC ROTATION”	adjust the picture position when it is not aligned with the TV screen. Press + or – to adjust the picture position, then press ENTER.
“ECO MODE”	reduce power consumption of your TV to save energy. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.
“PROGRAM SETUP”	adjust each channel settings (see **Adjusting each channel settings (PROGRAM SETUP)** on page 31).
“COLOR SYS”	select the color system. Normally, set this to “AUTO”.

To return to the normal screen

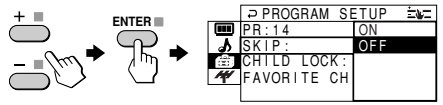
Press MENU.

Adjusting each channel settings (PROGRAM SETUP)

1 Select “PROGRAM SETUP” from the “SETUP” menu.

2 Select “PR” and press ENTER. Press + or – to select the desired channel you want to adjust, then press ENTER.

3 Press + or – to select the desired item (e.g., “SKIP”), then press ENTER.



Select	To
“PR”	select the desired channel.
“SKIP”	skip unwanted or unused program number. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.
“CHILD LOCK”	prevent children from watching this selected channel. Press + or – to select “ON”, then press ENTER. The lock symbol ( ) appears on the screen. To cancel, select “OFF”, then press ENTER. If you preset a locked channel, that channel will be unlocked automatically.
“FAVORITE CH”	program six channels for direct selection. Press + or – to select one of the six favorite channel numbers (if you decide not to make any changes, select “↩”), then press ENTER. To view the selected favorite channel, refer page 17.

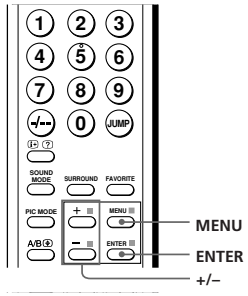
4 To continue adjusting other channels, press + or – to select “PR”, then repeat step 2 and 3.

To return to the normal screen

Press MENU.

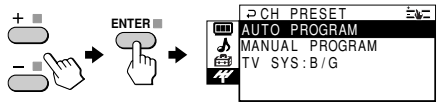
Changing the Channel Preset (“CH PRESET”) setting

The “CH PRESET” menu allows you to adjust the setup of your TV. For example, you can manually tune in a channel with a weak signal that fails to be tuned in by automatic presetting.

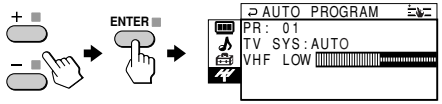


1 Press MENU.

2 Press + or – to select the “CH PRESET” icon (), then press ENTER.



3 Press + or – to select the desired item (e.g., “AUTO PROGRAM”), then press ENTER.



Select	To
“AUTO PROGRAM”	preset channels automatically.
“MANUAL PROGRAM”	preset channels manually. See **Presetting channels manually** on page 33.
“TV SYS”	select the TV system. Press + or – to select either “B/G”, “I”, “D/K” or “M”, then press ENTER.

To return to the normal screen

Press MENU.

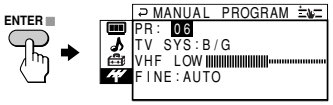
Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 23.

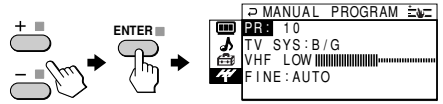
Presetting channels manually

1 After selecting “MANUAL PROGRAM”, select the program number to which you want to preset a channel.

(1) Make sure “PR” is selected, then press ENTER.



(2) Press + or – until the program number you want to preset (e.g., program number “10”) appears on the menu, then press ENTER.

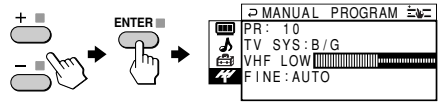


Tip

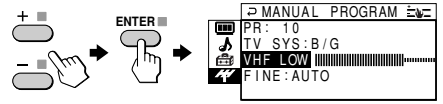
- You can also select the program number with the PROGR +/– or number buttons.

2 Select the desired channel.

(1) Press + or – to select either “VHF LOW”, “VHF HIGH”, or “UHF”, then press ENTER.

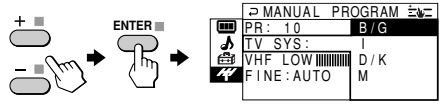


(2) Press + or – until the desired channel’s broadcast appears on the TV screen, then press ENTER.

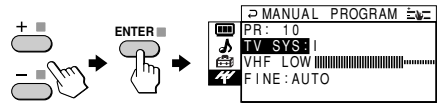


3 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Press + or – to select “TV SYS”, then press ENTER.



(2) Press + or – until the sound becomes normal, then press ENTER.

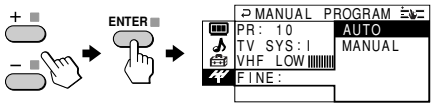


continued

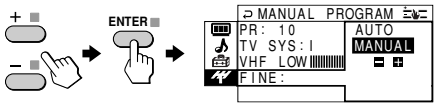
Changing the "CH PRESET" setting (continued)

4 If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "FINE" tuning feature.

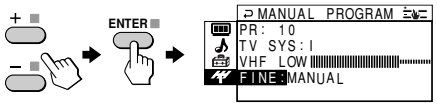
(1) Press + or – to select "FINE", then press ENTER.



(2) Press + or – to select "MANUAL", then press ENTER.



(3) Press + or – until the picture and sound quality are optimal, then press ENTER. The + or – icon on the menu flashes while tuning.



To return to the normal screen

Press MENU.

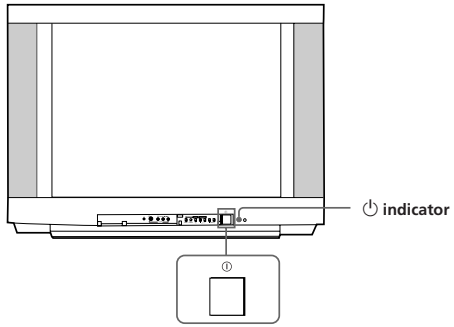
Notes

- The TV system ("TV SYS") and fine tuning ("FINE") settings are memorized for each program number.
- If you preset a locked channel ("CHILD LOCK"), that channel will be unlocked automatically (see page 31).

Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ (standby) indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.

Front of TV



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

2 Count the number of times the ⏻ indicator flashes.

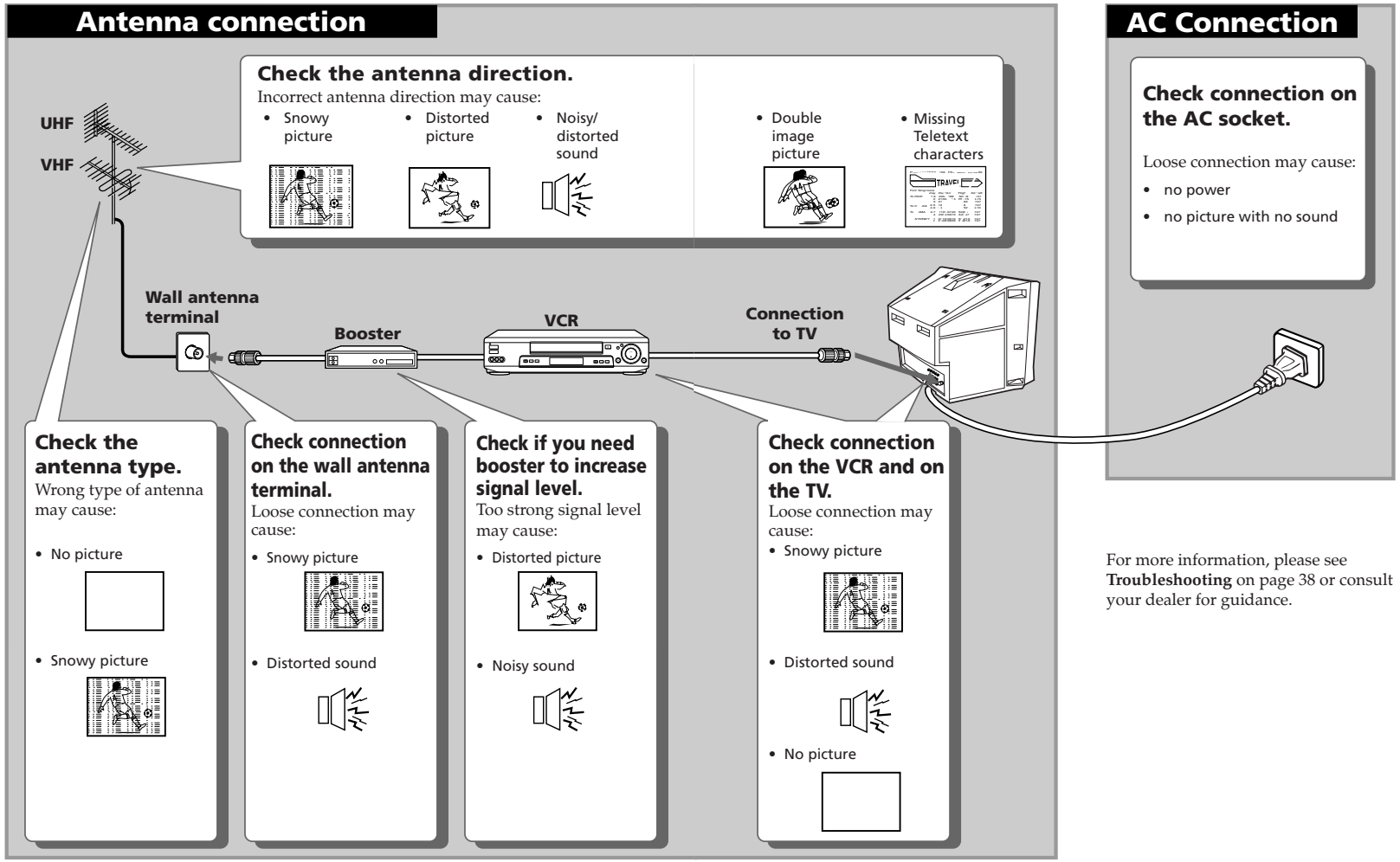
3 Press ⏻ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashed.
Be sure to note the model name and serial number located on the rear of your TV.

KV-EX29M61
RM-964

Troubleshooting Shortcuts

For better viewing, please check the following connections.



For more information, please see **Troubleshooting** on page 38 or consult your dealer for guidance.

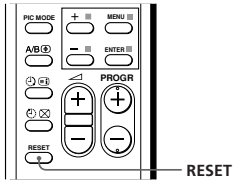
Troubleshooting

If you have any problem while viewing your TV, you can either use the Reset function or check the Troubleshooting guide below. If the problem persists, contact your Sony dealer.

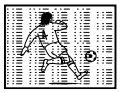
Reset function

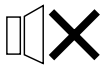
Press the RESET button on your remote control. Your TV will go blank for about half a second then the picture will reappear with "RESET" displayed on your TV screen for about 10 seconds.

Pressing RESET will set your TV to the factory setting, but certain problems may be solved.



Troubleshooting guide

Symptom	Possible cause	Solutions	Page
Snowy picture  **Noisy sound**	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and at the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Display the "CH PRESET" menu and select "MANUAL PROGRAM" to preset the channel again.	33
	• The antenna type is inappropriate.	• Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	–
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture **Noisy sound**	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	–
Good picture **Noisy sound**	• The TV system setting or channel presetting is inappropriate or incomplete.	• If the sound of all the channels are noisy, display the "CH PRESET" menu and select "AUTO PROGRAM" to preset the channels again. • If the sound of some channels is noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").	32 33

Symptom	Possible cause	Solutions	Page
No picture **No sound**	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/⏻ (power). • Press ⏻ (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	11 12
Good picture **No sound** 	• The volume level is too low.	• Press + to increase the volume level.	12
	• The sound is muted.	• Press 🔇 to cancel the muting.	12
	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	19
Dotted lines or stripes	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or "ghosts"	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning ("FINE") function.	– 34
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color	• The color level setting is too low.	• Display the "PICTURE" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level.	27
	• The color system setting is inappropriate.	• Display the "SETUP" menu and check the color system ("COLOR SYS") setting (usually set this to "AUTO").	30
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–

continued

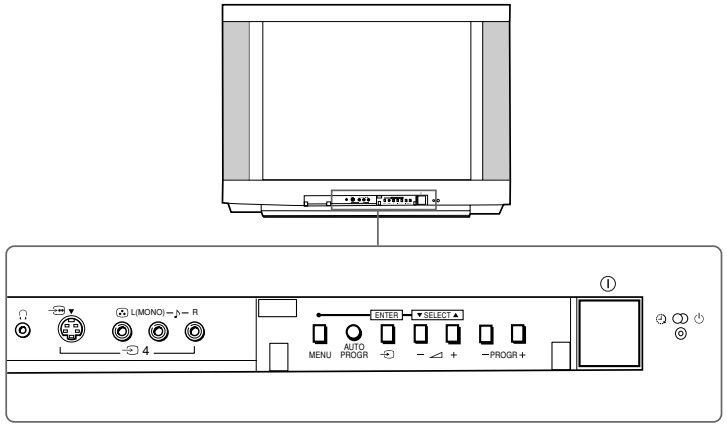
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Abnormal color patches	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about five minutes, then turn it on again.	–
TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press A/B until "AUTO" appears on the screen.	19
Stereo broadcast sound switches on and off or is distorted.	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
or	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
The sound switches between stereo and monaural frequently.	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	19
"100" appears at the top of the screen and there is no Teletext display.	• The channel carries no Teletext broadcast.	—	21
Teletext display is incomplete (snowy picture or double images).	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR, and at the wall.	4
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is too low.	• Try using a booster. • Use the fine tuning ("FINE") function.	– 34
Picture slant	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "SET UP" menu and adjust "PIC ROTATION" until the picture position is optimal.	– 30

Symptom	Possible cause	Solutions	Page
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	34
The ⏻ indicator on your TV flashes red a number of times between 3-second intervals.	• Your TV may need servicing.	• Contact your nearest Sony service center.	35
Cannot play shooting games.	• Some shooting games which involve pointing a light beam at the TV screen with an electronic gun or rifle cannot be used with your TV. For detail, see the instruction manual supplied with the video game software.	—	–
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.	—	–
A small "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

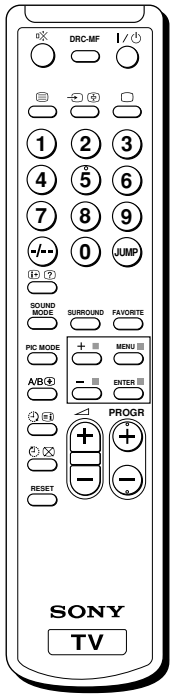
Overview of controls

TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
⏻	Turn off completely or turn on the TV.	11
PROGR +/–	Select program number.	11
⏻	Standby indicator.	11
+/–	Adjust volume.	12
⏎	Select TV or video input.	12
⏲	Wake Up indicator.	14
∞	Stereo/Bilingual indicator.	19
MENU	Display the menu.	25
🎧	Headphone jack.	–

Remote control



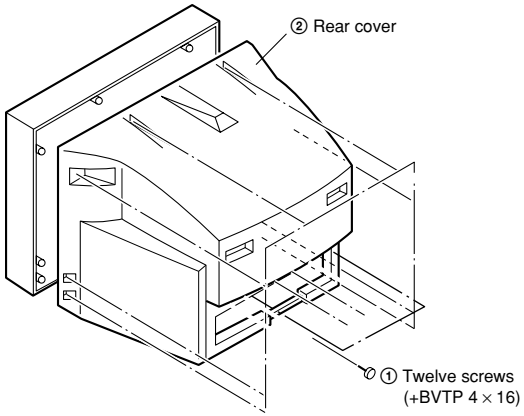
The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations

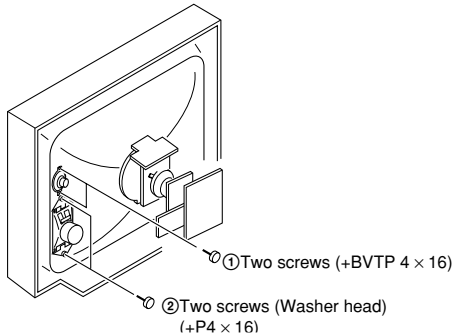
Button	Function	Page
I/⏻	Turn off temporarily or turn on the TV.	11
PROGR +/–	Select program number.	11
0 – 9, -/--	Input numbers.	11
ⓘ	Display on-screen information.	12
🔇	Mute the sound.	12
▢	Display the TV program.	12
⏎	Select TV or video input.	12
+/–	Adjust volume.	12
JUMP	Jump to previous channel.	12
Timer operation		
⏲	Set TV to turn on automatically.	14
⏲	Set TV to turn off automatically.	14
SOUND MODE	Select sound mode.	15
PIC MODE	Select picture mode.	15
DRC-MF	Select DRC-MF mode.	16
Favorite Channel operations		
FAVORITE	Display favorite channels.	17
1 – 6	Select desired channel.	17
SURROUND	Select surround mode.	18
Stereo/bilingual operations		
A/B	Select stereo/bilingual mode.	19
Teletext operations		
☰	Display Teletext broadcast.	21
☰i	Display Teletext service contents.	22
⊜	Stop Teletext display from scrolling.	22
?	Reveal concealed information.	22
⊕	Enlarge the Teletext display.	22
⊠	Show TV screen while waiting for Teletext page.	22
0 - 9	Input Teletext page number.	22
PROGR +/–	Display the next or previous page.	22
■ (red, green, yellow, blue)	Access a FASTEXT menu.	22
Menu operations		
MENU	Display the menu.	25
+, –	Select and adjust items.	25
ENTER	Confirm selected items.	25
RESET	Set TV to factory setting.	38

SECTION 2
DISASSEMBLY

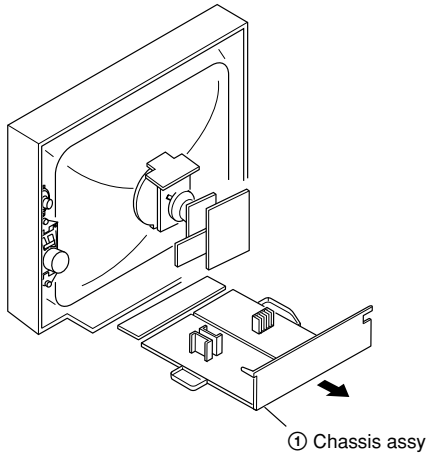
2-1. REAR COVER REMOVAL



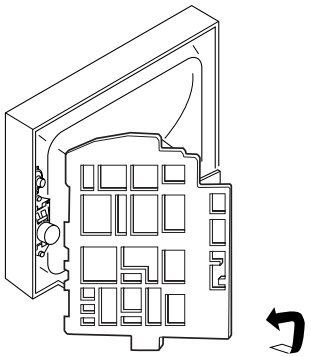
2-2. SPEAKER REMOVAL



2-3. CHASSIS ASSY REMOVAL



2-4. SERVICE POSITION



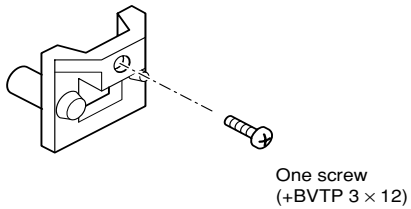
Note:

1. Disconnect the DGC connector from CN6603 (D board)
2. Disconnect Lead Assy Speaker (R) from Relay.
3. Undress necessary wires that creates tension while placing the chassis into Service Position.

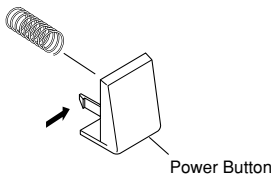
2-5. REPLACEMENT OF PARTS

For Power Button removal, push the claw in the direction of the arrow and remove.

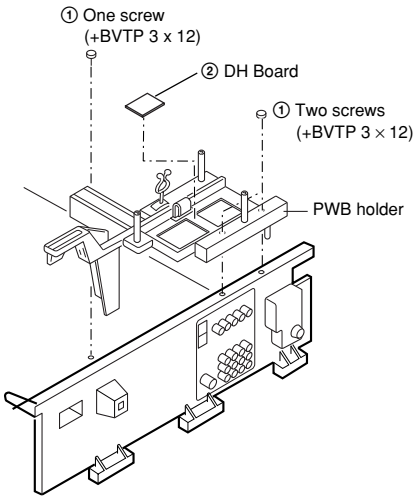
2-5-1. Replacement of Light Guide



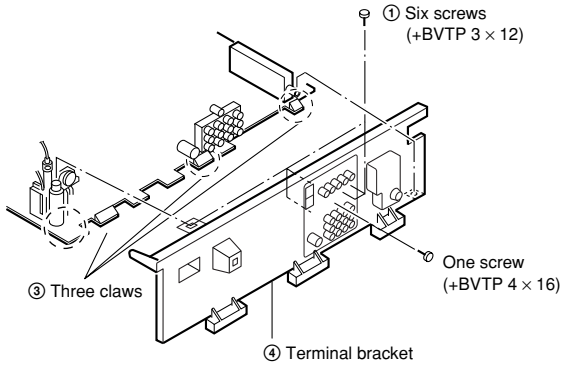
2-5-2. Replacement of Power Button



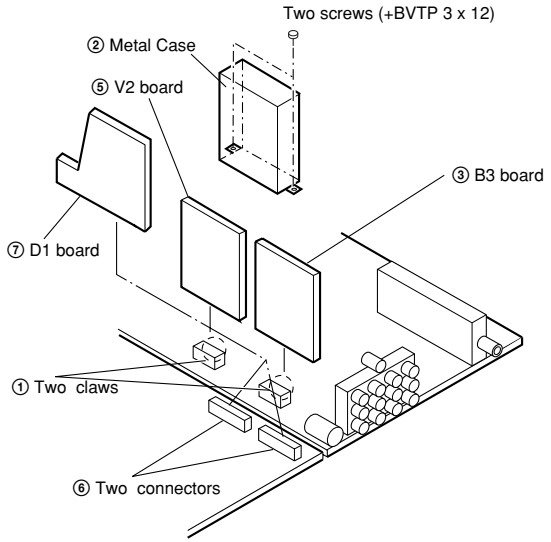
2-6. PWB AND DH BOARDS REMOVAL



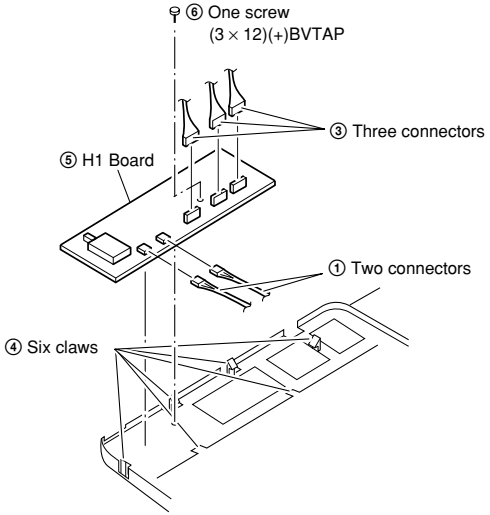
2-7. TERMINAL BRACKET REMOVAL



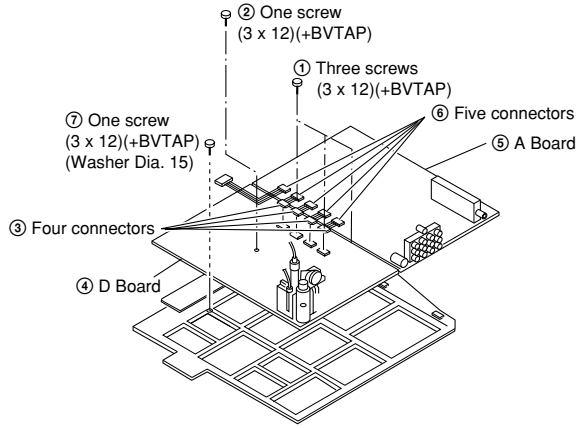
2-8. B3, V2 AND D1 BOARDS REMOVAL



2-9. H1 BOARD REMOVAL



2-10. A AND D BOARDS REMOVAL

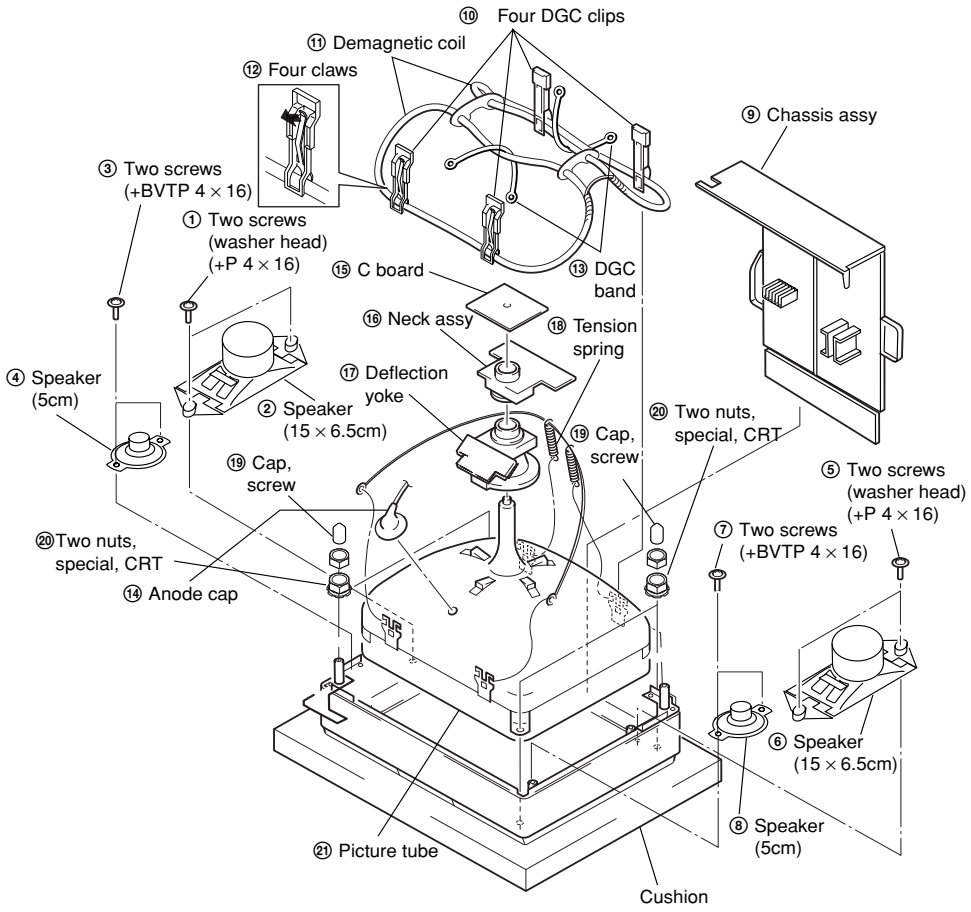


2-11. PICTURE TUBE REMOVAL

Note:

i) When removing the Nut, Locking; first make sure to hold the screw, special CRT with a spanner (diameter 6) while opening the Nut, Locking using a spanner. Then proceed to remove the Nut, special CRT using a torque driver.

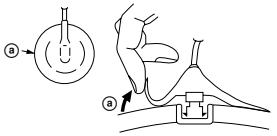
ii) Remove all the necessary CRT supports located on top left and right, bottom left and right prior to removing the CRT.


⑩ Four DGC clips
⑪ Demagnetic coil
⑫ Four claws
⑨ Chassis assy
③ Two screws (+BVTP 4 × 16)
① Two screws (washer head) (+P 4 × 16)
⑮ C board
⑬ DGC band
⑯ Neck assy
⑱ Tension spring
④ Speaker (5cm)
⑰ Deflection yoke
② Speaker (15 × 6.5cm)
⑲ Cap, screw
⑳ Two nuts, special, CRT
⑤ Two screws (washer head) (+P 4 × 16)
⑦ Two screws (+BVTP 4 × 16)
⑥ Speaker (15 × 6.5cm)
⑧ Speaker (5cm)
㉑ Picture tube
Cushion

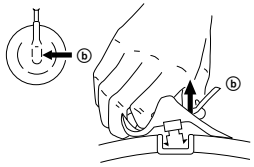
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

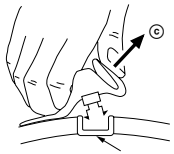
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



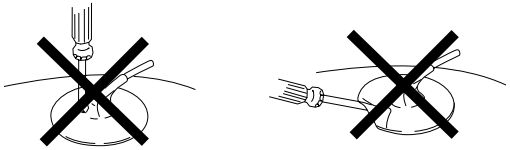
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Do not damage the surface of anode-caps with sharp shaped objects.

② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.

③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.

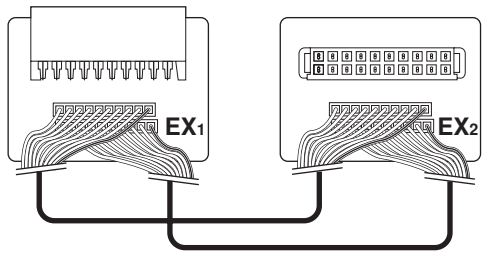


SECTION 3
SERVICE JIG

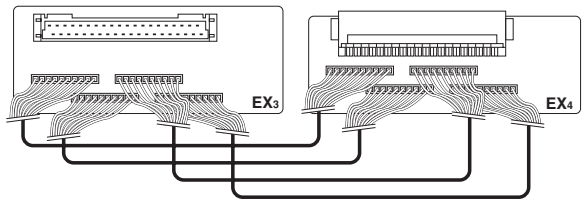
3-1. JIGS REQUIRED FOR SERVICING

REF NO.	DESCRIPTION	PART NO.	REMARK
J-1	TOOL (20P), SERVICE	3-702-763-01	For A to V2 board extension
J-2	TOOL (40P), SERVICE	3-702-764-01	For B3 to A board extension
J-3	TOOL (30P), SERVICE	3-702-773-01	For D to D1 board extension

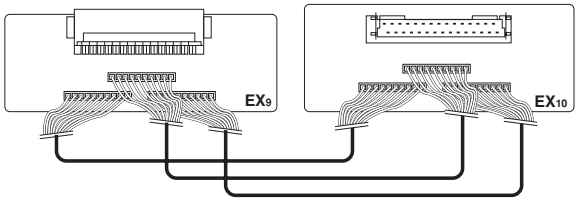
J-1



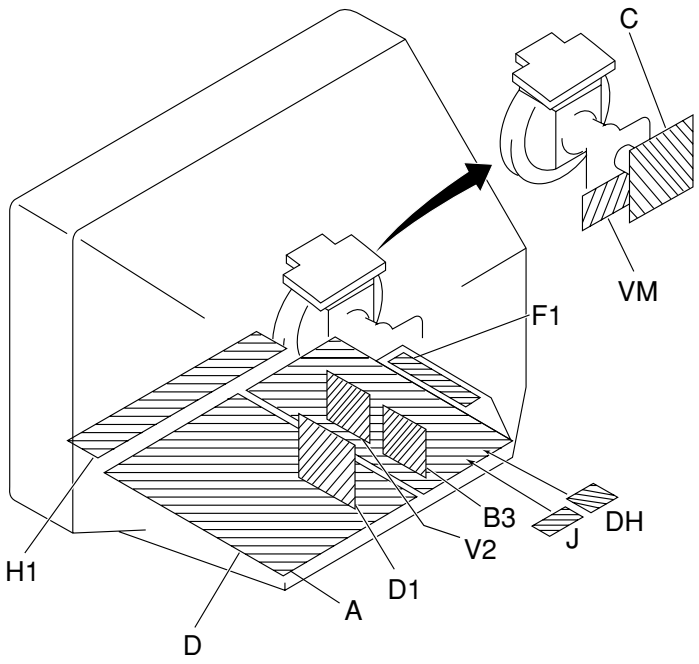
J-2



J-3



SECTION 4
CIRCUIT BOARDS LOCATION



SECTION 5
ADVANCE OPERATION

5-1. "RESET" FUNCTION

1. Purpose

If a customer faces some setting problem that cannot be solved, using the "RESET" function some items will be reset to its original setting (shipping condition).

2. How to Operate

There are 2 ways to access to the "RESET" Function:-

a) By pressing "RESET" button on the Remote Commander.
b) By pressing "MENU" button or "SELECT" button (for non-menu models) on the Front Key Input and hold it down for 5 seconds.

3. Subsequent of Operation

Sequential to the resetting operation (either methods being used in No. 2), TV set would shut down once and automatically turn on again. The power-off duration is expected to be about 500msec. An OSD message, "RESET" tentatively will be displayed for 10 sec after IK status gets stable.
As a result, some items will be reset to an initial condition (shipment condition) wheareas some other remains at the last selection by user.

Items that remains at the last selection by user

Program No., Favourite CH Setup, PIC rotation, OSD Language, Fine tuning, TV System, Skip

Reset Items

Video input	RF	Color system(RF)	AUTO*
Volume	30	Antenna sensitivity	HIGH*
DRC-MF	DRC1250	Stereo mode	STEREO/NICAM*
Picture mode	DYNAMIC	Bilingual mode	MAIN*
Sound mode	DYNAMIC	High-deviation mode	AUTO*
Surround mode	OF	Child lock	OFF*
Color system(video)	AUTO	Wide mode	OFF
Multi picture(PIP)	OFF	Game mode	OFF
PIP position	Bottom-right	Teletext mode	OFF
Favourite CH mode	AUTO	Sleep timer	OFF
OSD recall	OFF	Wake-up timer	OFF
Intelligent volume	OFF	Sound muting	OFF
ECO mode	OFF		

*= only when in RF mode

SECTION 6
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

6-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Position neck assy as shown in Fig6-1.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 6-1 through 6-3.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 6-2.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.

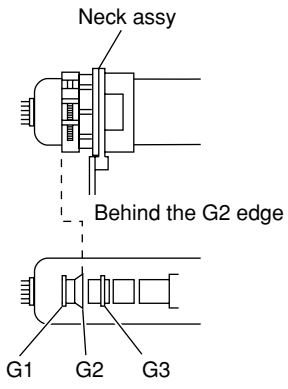


Fig. 6-1

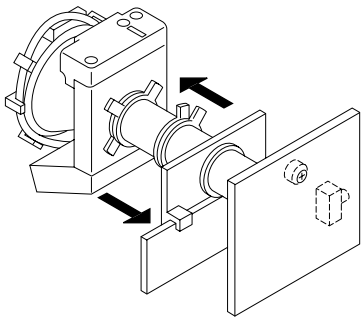


Fig. 6-2

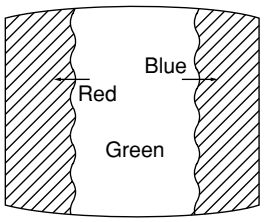


Fig. 6-3

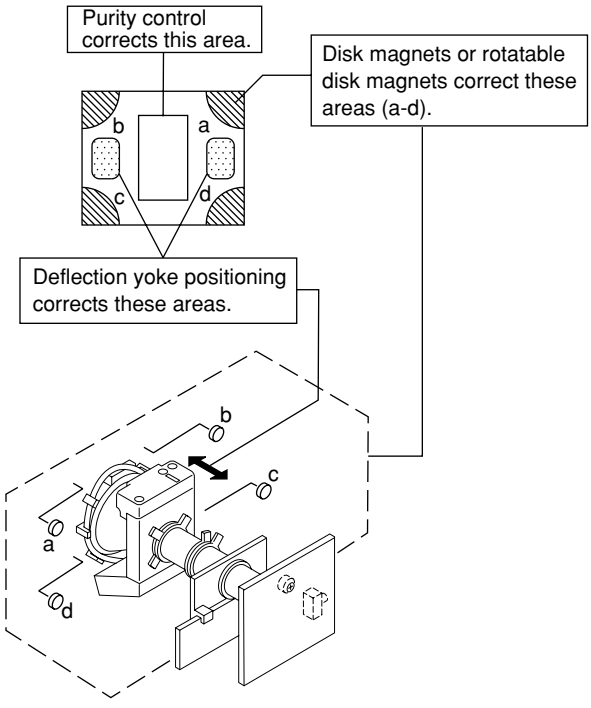


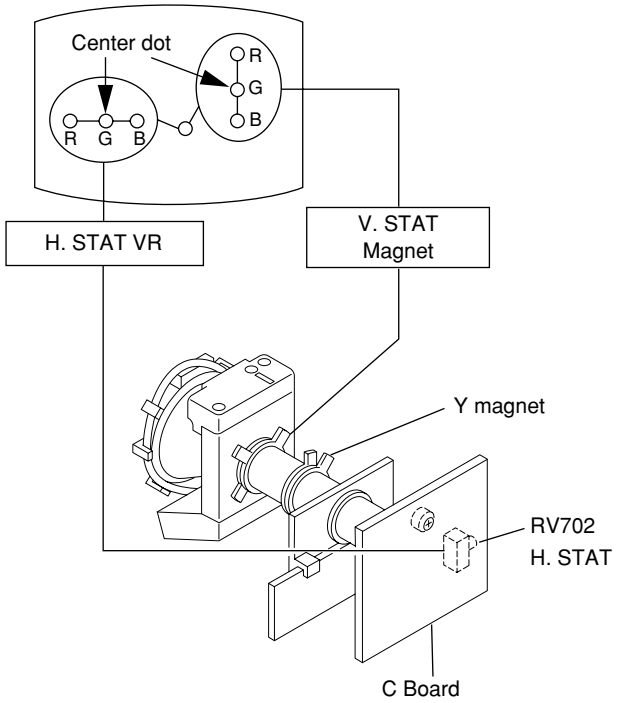
Fig. 6-4

6-2. CONVERGENCE ADJUSTMENT

Preparation :

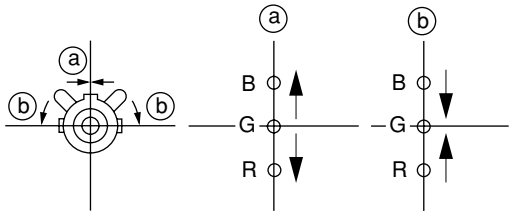
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Set the PICTURE 70% and BRIGHTNESS 0%.
- Cross hatch / Dot pattern.

(1) Horizontal and Vertical Static Convergence

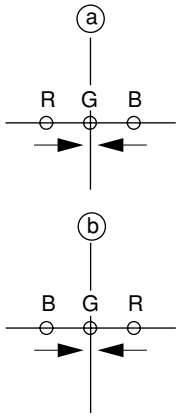


1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. Adjust Horizontal Trapezoid with “DAC 04 HTR” in Service Mode to make H-Trapezoid distortion best.
4. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)

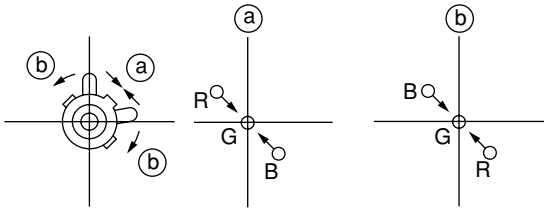
① V. STAT

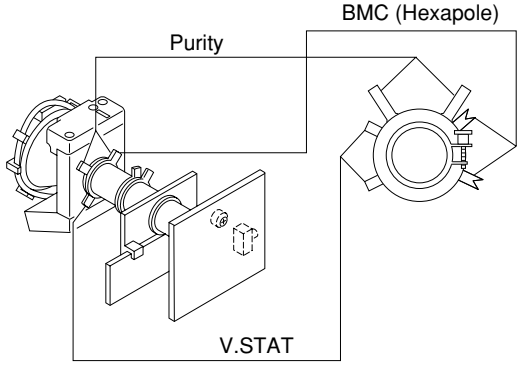


② H. STAT VR

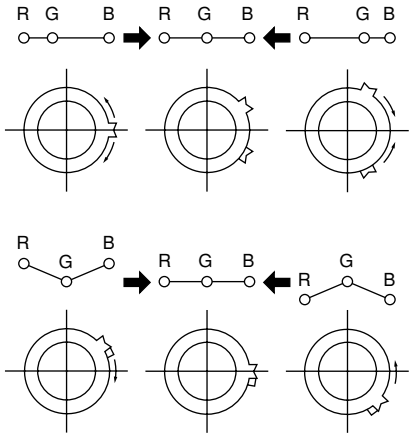


③





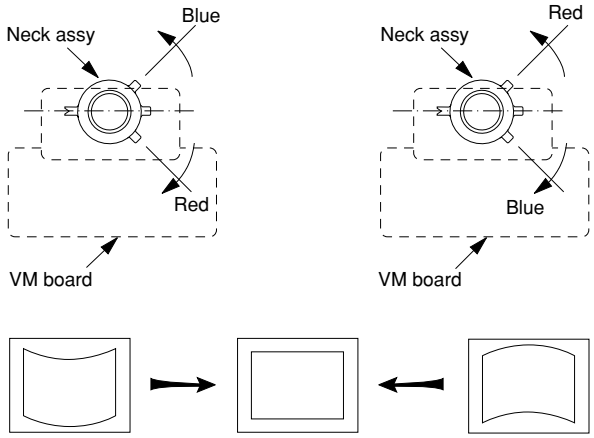
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



⑤ Y separation axis correction magnet adjustment.

1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .

2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.



Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

(2) Dynamic Convergence Adjustment

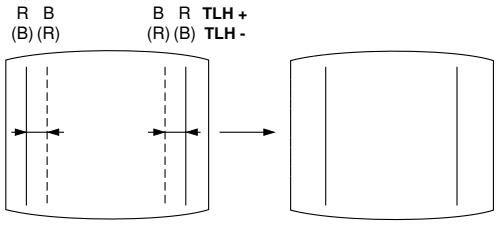
Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence
- Set the PICTURE and BRIGHTNESS to normal.

1. Adjust TLH. (TLH convergence piece)

① Receive the dot/hatch pattern signal and adjust picture quality by the menu.

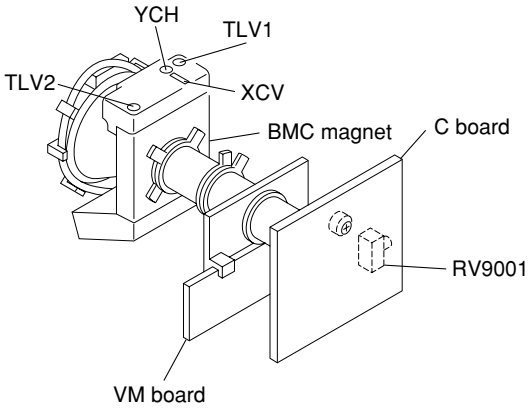
② Correct horizontal mis-convergence of red and blue of both sides on the X axis.
When red is outside insert TLH convergence piece to right side (TLH +) views from DY neck. And when blue is outside, insert it to left side (TLH –) and take both sides.



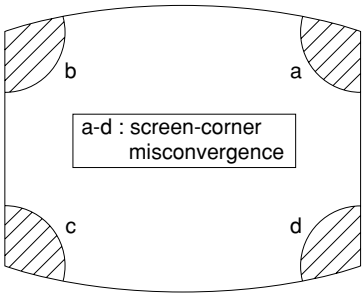
2. Adjust XCV core.
To able to become balance of XCV on the X axis well.

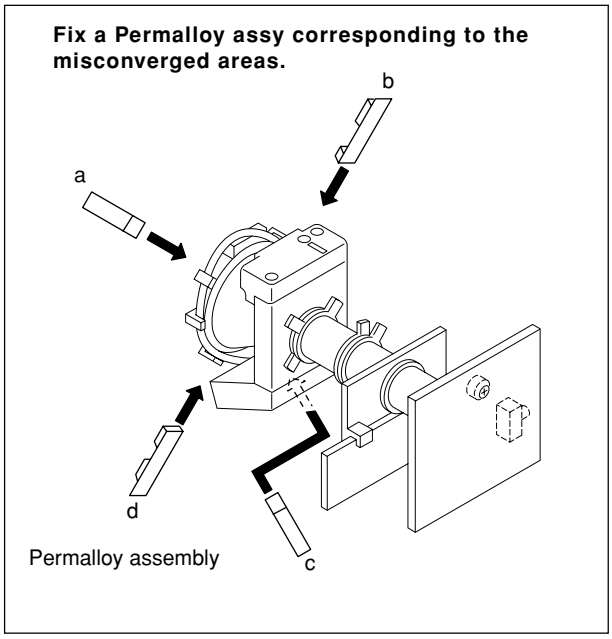
3. Adjust V-TILT.
Correct the vertical mis-convergence of red and blue of vertically sides on the Y axis.

4. Adjust YCH.
Adjust horizontal mis-convergence of red and blue of vertically sides on the Y axis. Mentioned above steps 2 to 4 are adjusting respectively perform minuteness tracking.



(3) Screen-corner Convergence



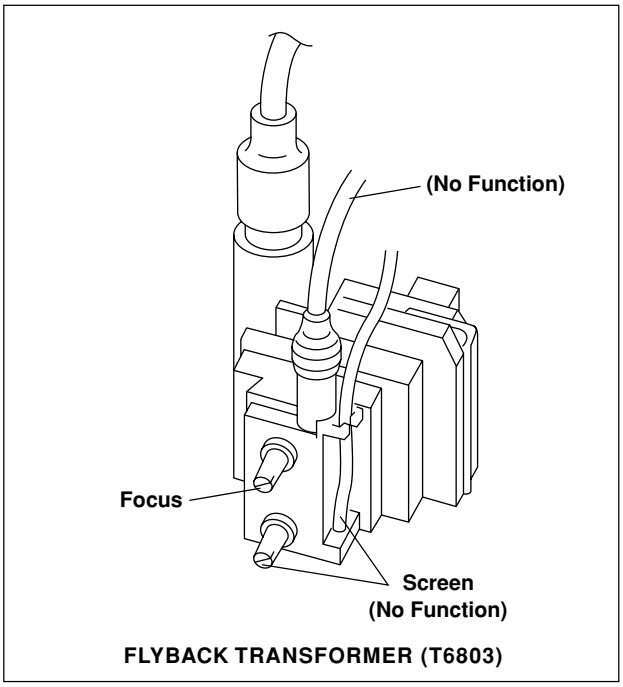


6-3. FOCUS ADJUSTMENT

Note

Focus adjustment should be completed before W/B adjustment.

(1) Receive digital monoscope pattern.
(2) Set "A/V CONTROL" to "STANDARD".
(3) Adjust FOCUS VR so that the center of the screen becomes just focus.
(4) Change the receiving signal to white pattern and blue back.
(5) Confirm MAGENTA RING is not noticeable. In case MAGENTA RING is obvious, adjust FOCUS VR to balance between MAGENTA RING and FOCUS adjustment.



6-4. NECK ASSY TWIST ADJUSTMENT

(1) Receive dot/hatch pattern DRC-MF, DRC1250, DYNAMIC.
(2) Turn FOCUS VR fully counter-clockwise.
(3) Confirm the dot shape at the screen center. (Fig. 6-4)
(4) Resume FOCUS VR.

Note

In case of turning NECK ASSY, loosen the screw 3 turns. Do not move the position.

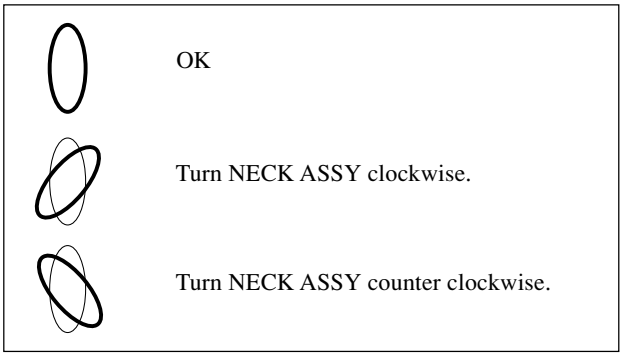
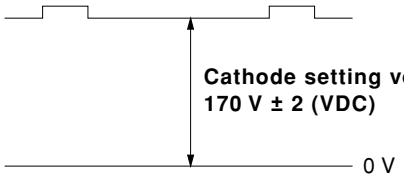


Fig. 6-4

6-5. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE and BRIGHTNESS to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the C board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Whilst watching the picture, adjust the screen VR [RV9002] located on the C board to the point just before the retrace lines disappear (to the point before cut-off)



2. WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 7-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set the following condition.
   PICTURE minimum, BRIGHTNESS 50%
4) Select GCT (WHB 7) and BCT (WHB 8) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5) Set the PICTURE to maximum.
6) Select GDR (WHB 4) and BDR (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].

SECTION 7
CIRCUIT ADJUSTMENTS

7-1. ADJUSTMENTS WITH COMMANDER

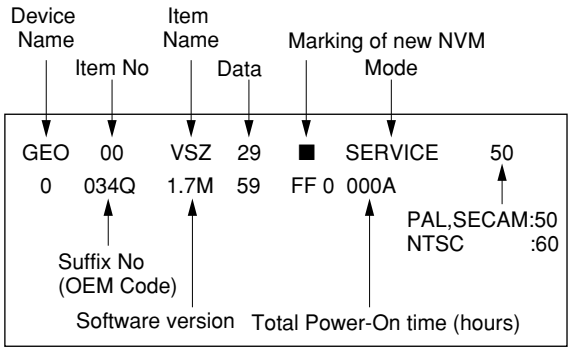
Service adjustments to this model can be performed using the supplied Remote Commander RM-964.

a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

The screen display is :



b. CANCELLATION OF SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment item Name.
3) Press [3] or [6] to raise/lower the data value.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. OTHER FUNCTION VIA REMOTE COMMANDER

[7], [0]	All the data becomes the values in memory.
[8], [0]	All goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[DISPLAY], [0]	Write 50Hz adjustment data to 60Hz, or vice versa.
[2], [0]	Copy and write all data.
[Cursor +/–]	Skip category (device) to caategory (device)

example : GEO 00 VSZ
↕
DAC 00 HCT

e. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

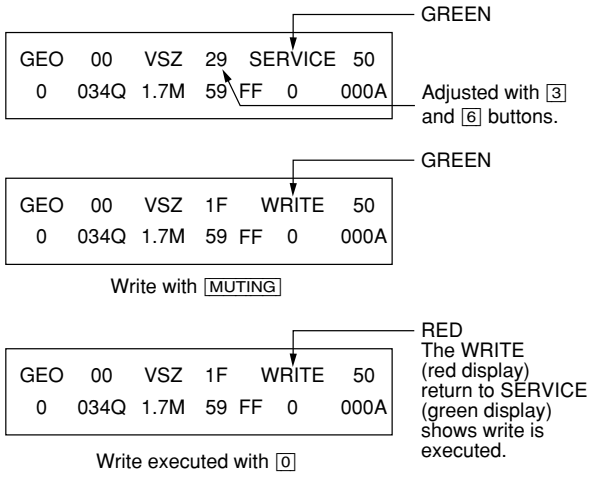
7-2. ADJUSTMENT METHOD

Item Number 00 of device GEO

This explanation uses V-size as an example.

1. Select "GEO 00 VSZ" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Press [MUTING] button to indicateWRITE on screen. (The display from SERVICE (green display) to WRITE (green display).
5. Execute the writing with the [0] button. (The WRITE display changes to red color while executing and then back to SERVICE (green display).
6. The WRITE execution is completed.

Example on screen display :-


GREEN
GEO 00 VSZ 29 SERVICE 50
0 034Q 1.7M 59 FF 0 000A
Adjusted with [3] and [6] buttons.
GREEN
GEO 00 VSZ 1F WRITE 50
0 034Q 1.7M 59 FF 0 000A
Write with [MUTING]
RED
The WRITE (red display) return to SERVICE (green display) shows write is executed.
GEO 00 VSZ 1F WRITE 50
0 034Q 1.7M 59 FF 0 000A
Write executed with [0]

Use the same method for all Items.

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

TVG	Functionality		Initial	Range	Function							Device Name
						50			60			
Category	No.	Name				50	50NC	50VC	60	60 NC	60VC	
GEO	00	VSZ	21	3F	V SIZE		1A	1A		1C	1C	CXA2100AQ
	01	VPS	27	3F	V POSITION		25	25		22	22	
	02	VLN	5	0F	V LINEARITY		06	06		06	06	
	03	SCO	0A	0F	S CORRECTION		09	09		09	09	
	04	HSZ	1E	3F	H SIZE		1E	1E		1B	1B	
	05	HPS	2F	3F	H POSITION		24	22		1B	1A	
	06	PAP	28	3F	PIN AMP		2D	2F		30	33	
	07	UPN	25	3F	UPPER CORNER PIN		**24**	28		26	29	
	08	LPN	23	3F	LOWER CORNER PIN		23	26		24	27	
	09	TRZ	0C	0F	TRAPEZIUM		0B	0B		0A	0A	
	0A	AGL	0A	0F	AFC ANGLE		09	09		09	09	
	0B	BOW	6	0F	AFC BOW		0A	0A		0A	0A	
	0C	**LBL**	12	3F	LEFT H BLANKING		16	16		21	21	
	0D	**RBL**	2C	3F	RIGHT H BLANKING		1B	1B		1C	1C	
	0E	**MPN**	0	3	MIDDLE PIN DISTORTION COMPENSATION		0	0		0	0	
	0F	**UVL**	0	0F	UPPER V LINEARITY	0			0			
	10	**LVL**	0	0F	LOWER V LINEARITY	0			0			
	11	**HCP**	0	3	HORIZONTAL HIGH VOLTAGE COMPENSATION		0	0		0	0	
	12	**VCP**	1	3	VERTICAL HIGH VOLTAGE COMPENSATION		0	0		0	0	
	13	VAS	2F	3F	V ASPECT		**2F**	2D		**2F**	2D	
	14	VSC	1F	3F	V SCROLL	1F	**1F**	1D	1F	**1F**	1E	
	15	**USC**	0	1	UNDER-SCAN MODE ON/OFF		0	1		0	1	
	16	**VBW**	0	3	V BLANKING WIDTH CONTROL		0	2		0	0	
	17	**AT1**	2	3	AKB REFERENCE TIMING		2	1		2	0	
	18	CPY	0	1	COPY THE GEO DATA TO ALL 50/60HZ NVM AREA							

Adjustment Item Table

TVG	Functionality		Initial	Range	Function										Device Name
						50			60			Eco Mode			
Category	No.	Name				50	50NC	50VC	60	60NC	60VC	Eco OnNC	Eco OffNC	Eco ONVC	Eco OffVC	
DAC	00	HCT	33	FF	H CENTER	CC			CC							MB88141
	01	HLN	27	3F	H LINEARITY		2B	2B		2D	2D					
	02	MDP	26	3F	MIDDLE PIN		**1F**	**1F**		**1F**	**1F**					
	03	CCP	37	3F	LOWER CORNER PIN		**10**	**04**		**10**	**04**					
	04	HTR	26	3F	HORIZONTAL TRAPEZIUM		1F	1F		1F	1F					
	05	PBA	1F	3F	PIN UNBALANCE		16	16		16	16					
	06	**DPH**	1F	3F	DF PHASE		1F	1F		1F	1F					
	07	**QPH**	19	3F	QP PHASE		19	19		19	19					
	08	**QAC**	23	3F	QP AMPLITUDE		23	23		23	23					
	09	**QDC**	20	3F	QP DC LEVEL		20	20		20	20					
	0A	**QDV**	1F	3F	QP V MODULATION		1F	1F		1E	1E					
	0B	**QAV**	1A	3F	QP AMPLTUDE MODULATION		1A	1A		1D	1D					
	0C	**ABC**	0	FF	ABL D/A CONTROL							00	7E	00	7E	
	0D	CPY	0	1	COPY THE DAC DATA TO ALL 50/60Hz NVM AREA											

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
WHB	00	**CBO**	7	0F	DC OFFSET CANCELLER FOR Cb1	07	CXA2100QA
	01	**CRO**	7	0F	DC OFFSET CANCELLER FOR Cr1	07	
	02	SBR	18	3F	SUB BRIGHTNESS CONTROL	18	
	03	**RDR**	29	3F	R DRIVE	29	
	04	GDR	25	3F	G DRIVE	25	
	05	BDR	26	3F	B DRIVE	26	
	06	**RCT**	24	3F	R CUTOFF	24	
	07	GCT	12	3F	G CUTOFF	12	
	08	BCT	31	3F	B CUTOFF	31	
	09	**SBO**	29	3F	SUB BRIGHTNESS OFFSET	29	
	0A	**RDO**	1F	3F	R DRIVE OFFSET	1F	
	0B	**GDO**	1A	3F	G DRIVE OFFSET	1A	
	0C	**BDO**	1A	3F	B DRIVE OFFSET	1A	
	0D	**RCO**	1F	3F	R CUTOFF OFFSET	1F	
	0E	**GCO**	1E	3F	G CUTOFF OFFSET	1E	
	0F	**BCO**	15	3F	B CUTOFF OFFSET	15	

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common																Device Name
									50			60			Picture Mode				Eco Mode				
Category	No.	Name					50	60	TV	Video	DVD	TV	Video	DVD	Dynamic	Standard/ Drama	Hi-Fine/ Soft	Personal	Eco OnNC	Eco OffNC	Eco ONVC	Eco OffVC	
SAJ	00	**PIC**	3F	3F	PICTURE CONTROL										3F	3F	3F						CXA2100AQ
	01	**BRT**	1F	3F	BRIGHTNESS CONTROL										1F	1F	1F						
	02	**COL**	27	3F	COLOR CONTROL										27	27	27						
	03	**HUE**	1F	3F	HUE CONTROL										1F	1F	1F						
	04	**SHP**	24	3F	SHARPNESS CONTROL										24	24	24						
	05	**VML**	3	3	VM LEVEL										03	03	03	03					
	06	**DYC**	1	1	DYNAMIC COLOR ON/OFF										01	01	01	01					
	07	**CTM**	0	1	COLOR TEMPERATURE FOR DYNAMIC COLOR										00	00	00	00					
	08	**CAX**	2	3	COLOR MATRIX SPECIFICATION		02	02															
	09	**GMA**	3	3	GAMMA CORRECTION										03	03	03	03					
	0A	**DCT**	1	3	DC TRANMISSION CONTROL										01	01	01	01					
	0B	**DPL**	1	3	AUTO PEDESTAL LEVEL CONTROL										01	01	01	01					
	0C	**ABM**	0	3	ABL MODE CONTROL										00	00	00	00					
	0D	**ABT**	0	3	ABL CURRENT DETECTION Vth CONTROL														00	00	00	00	
	0E	**CLO**	9	0F	COLOR OFFSET				09	09		09	09										
	0F	**CLW**	3	7	COLOR STEP WIDTH TO THE CHANGE OF S/N	03																	
	10	**HUO**	9	0F	HUE OFFSET				09	09		09	09										
	11	**SHO**	7	1F	SHARPNESS OFFSET				07	07	07	07	07	07									
	12	**SHW**	1	7	SHARPNESS STEP WIDTH TO THE CHANGE OF S/N	01																	
	13	**BRO**	7	0F	BRIGHTNESS OFFSET														07	07	07	07	

TVG	Functionality		Initial	Range	Function	Common																Device Name
								50			60			Picture Mode				Eco Mode				
Category	No.	Name					TV	Video	DVD	TV	Video	DVD	Dynamic	Standard/ Drama	Hi-Fine/ Soft	Personal	Eco OnNC	Eco OffNC	Eco ONVC	Eco OffVC	
JGL	00	**PON**	1	1	RGB AND AKB REFERENCE PULSE OUTPUT ON/OFF	01															CXA2100AQ
	01	**RGB**	7	7	RGB OUTPUT SELECTION	07															
	02	**AGG**	0	3	AGING MODE SELECTION	00															
	03	**DPS**	0	1	Y/C DELAY LINE PASS MODE SWITCH	00															
	04	**BBT**	3	3	RGB BOTTOM LIMITTER CONTROL	03															
	05	**LML**	0	3	RGB AMPLITUDE LIMITTER CONTROL	00															
	06	**PAB**	0F	0F	DC LEVEL FOR PEAK ABL	0F															
	07	**SCO**	0C	0F	SUB PICTURE CONTROL	0C															
	08	**LV2**	7	0F	RBG LEVEL FOR RGB2	07															
	09	**SFO**	1	1	SHARPNESS CIRCUIT F0		01	01	01	01	01	01									
	0A	**PRO**	0	3	PRE/OVER-SHOOT RATIO CONTROL		00	00	00	00	00	00									
	0B	**LT1**	2	3	LUMINANCE TRANSIENT IMPROVEMENT								02	02	02	02					
	0C	**CT1**	1	3	CHROMINANCE TRANSIENT IMPROVEMENT								01	01	01	01					

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	50/60Hz		Device Name
Category	No.	Name					TV	Video	
PIP	00	**PRO**	0	1	PROGRESSIVE SCAN MODE ENABLE	00	00	00	SDA9489X
	01	**RED**	0	1	READ DOUBLE MODE	00	00	00	
	02	**FEI**	0	3	FIELD SELECT	00	00	00	
	03	**HPS**	35	FF	HORIZONTAL PICTURE POSITSION	35	35	35	
	04	**VPS**	1B	FF	VERTICAL PICTURE POSITION	1B	1B	1B	
	05	**HFP**	0	0F	HORIZONTAL FINE POSITIONING	00	00	00	
	06	**VFP**	0	0F	VERTICAL FINE POSITIONING	00	00	00	
	07	**DIS**	0	3	DISPLAY STANDARD	00	00	00	
	08	**HOS**	0	3	HORIZONTAL SIZE	00	00	00	
	09	**VES**	0	3	VERTICAL SIZE	00	00	00	
	0A	**FPS**	0	3	FORCE PARENT STANDARD	00	00	00	
	0B	**HZM**	0	7	HORIZONTAL ZOOM	00	00	00	
	0C	**VSP**	0	1	VERTICAL SYNC PULSE NOISE REDUCTION	00	00	00	
	0D	**VDL**	0	1F	VERTICAL SYNC PULSE DELAY	00	00	00	
	0E	**FRH**	5	7	FRAME WIDTH HORIZONTAL	05	05	05	
	0F	**FMV**	2	3	FRAME WIDTH VERTICAL	02	02	02	
	10	**VRD**	0	1	REDUCTION	00	00	00	
	11	**VBK**	0	1	VERTICAL BLANKING	00	00	00	
	12	**DLY**	0	F	SELECT DELAY	00	00	00	
	13	**PCR**	0	1	POSITION CORRECTION	00	00	00	
	14	**AGM**	3	3	AGC MODE	03	03	03	
	15	**AGC**	6	F	AUTOMATIC GAIN CONTROL VALUE	06	06	06	
	16	**CVB**	0	3	CVBS SELECT	00	00	00	
	17	**CPD**	1	3	CLAMPING DURATION	01	01	01	
	18	**CPT**	1	3	CLAMPPING PULSE START	01	01	01	
	19	**LUM**	0	3	LUMINANCE OFFSET	00	00	00	
	1A	**PLL**	0	3	INSERT PLL TIME CONSTANT		00	00	
	1B	**YCD**	2	F	Y/C DELAY	02	02	02	
	1C	**NSR**	0	3	NOISE REDUCTION FOR INSERT PLL		00	00	
	1D	**LSP**	0	1	STANDARD IDENTIFICATION SPEED	00	00	00	
	1E	**KIL**	0	3	COLOR KILLER TRESHOLD	00	00	00	
	1F	**BGP**	0	1	BURST GATE POSITION	00	00	00	
	20	**SEC**	0	1	SECAM IDENTIFICATION LEVEL	00	00	00	
	21	**DEM**	1	3	DEEMPHASIS SELECTION	01	01	01	
	22	**CMA**	0	3	CHROMA BANDWITH	00	00	00	
	23	**IFC**	2	3	IF COMPENSATION FILTER	02	02	02	
	24	**HUE**	0	1F	HUE	00	00	00	
	25	**SCA**	7	1F	COLOR SUBCARRIER ADJUSTMENT	07	07	07	
	26	**CON**	0	F	CONTRAST ADJUSTMENT	00	00	00	
	27	**BLR**	0	F	BLANKING LEVEL RED CHANNEL	00	00	00	
	28	**BRT**	0	F	BRIGHTNESS ADJUSTMENT	00	00	00	
	29	**BLG**	0	F	BLANKING LEVEL GREEN CHANNEL	00	00	00	
	2A	**BIR**	0	1	BLANKING INVERSION RED CHANNEL	00	00	00	
	2B	**BIB**	0	1	BLANKING INVERSION BLUE CHANNEL	00	00	00	
	2C	**BLB**	0	F	BLANKING LEVEL BLUE CHANNEL	00	00	00	
	2D	**INT**	0	1	REFRESH INTERVAL	00	00	00	
	2E	**PKR**	4F	FF	PEAK LEVEL RED CHANNEL	4F	4F	4F	
	2F	**PKG**	4F	FF	PEAK LEVEL GREEN CHANNEL	4F	4F	4F	
	30	**PKB**	4F	FF	PEAK LEVEL BLUE CHANNEL	4F	4F	4F	
	31	**FRY**	A	F	FRAME COLOR Y	0A	0A	0A	
	32	**OUT**	1	1	OUTPUT FORMAT	01	01	01	
	33	**FRU**	0	F	FRAME COLOR U	00	00	00	
	34	**FRV**	0	F	FRAME COLOR V	00	00	00	
	35	**SAT**	7	F	COLOR SATURATION ADJUSTMENT	07	07	07	
	36	**YPK**	7	7	Y PEAK ADJUSTMENT	07	07	07	
	37	**YCO**	0	F	Y CORING ENABLE	00	00	00	
	38	PAL	3	3	PAL ID LEVEL	03	03	03	
	39	POV	0	7	POSITION OFFSET VERTICAL	00	00	00	
	3A	POH	0	1F	POSITION OFFSET HORIZONTAL	00	00	00	
	3B	**VSH**	0	1F	VERTICAL SHRINK	00	00	00	
	3C	**HSH**	0	1F	H SHRINK	00	00	00	
	3D	**CPL**	1	3	CLAMPING PULSE LENGTH	01	01	01	

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	Multi Comb	3D Comb	S-Input	Other	TV	Video	DVD	TV		Video		DVD		Device Name
Category	No.	Name												50	60	50	60	50	60	
YCT	00	**TNT**	1F	3F	TINT ADJUSTMENT FOR NTSC															CXA2123Q
	01	**PNG**	1	1	PAL/NTSC GATE WIDTH	01														
	02	**PNI**	0	1	PAL/NTSC SENSITIVITY SW	00														
	03	SCL	7	0F	SUB COLOR CONTROL									07	07	07	07			
	04	SCT	8	0F	SUB CONTRAST CONTROL									08	08	08	08			
	05	**SFO**	2	3	SHARPNESS CENTER FREQUENCY CHANGING	02														
	06	**SEQ**	3	3	SHARPNESS EQUALIZER CHARACTERISTIC	03														
	07	**SHG**	5	0F	SHARPNESS GAIN CONTROL									05	05	05	05	05	05	
	08	**YOL**	1F	3F	Y-OUTPUT LEVEL CONTROL	1F														
	09	**BSP**	0	3	BLACK STRETCH START POINT CHANGING	00														
	0A	COL	1F	3F	Cb/Cr OUTPUT LEVEL CONTROL	1F														
	0B	**DCR**	0	3	DC RESTORATION RATIO ADJUSTMENT	00														
	0C	**BFO**	1	3	BPF/TQF F0 ADJUSTMENT	01														
	0D	**BFQ**	2	3	BPF/TQF Q ADJUSTMENT	02														
	0E	**FSW**	1	1	BPF/TQF SWITCH	01														
	0F	**SDT**	1	1	SECAM DOUBLE TRAP SWITCH	01														
	10	**LPF**	1	1	Y/Cb/Cr LPF SWITCH	01														
	11	**YDL**	6	0F	Y-DL TIME ADJUSTMENT		06	06	06	06										
	12	**CMT**	0	1	Cb/Cr OUTPUT MUTE SWITCH	00														
	13	**BO1**	7	0F	Cb OFFSET 1 ADJUSTMNET (MAIN ROUTE)	07														
	14	**RO1**	7	0F	Cr OFFSET 1 ADJUSTMENT	07														
	15	**CDF**	0	7	V COUNT DOWN FREQUENCY SWITCH	00														
	16	**CDM**	0	3	V COUNT DOWN JUDGE SWITCH	00														
	17	**AFC**	0	3	AFC SENSITIVITY SWITCH							00	00							
	18	**MVM**	1	1	MACROVISION MASK + AFC MASK	01														
	19	**SRY**	7	0F	SECAM R-Y BLACK ADJUSTMENT	07														
	1A	**SBY**	1	0F	SECAM B-Y BLACK ADJUSTMENT	01														
	1B	**BEL**	2	3	SECAM BELL/HPF SWITCHING	02														
	1C	**BLF**	0	1	BELL F0 ADJUSTMENT	00														
	1D	**SV1**	0	1	SECAM V-ID SWITCH	00														
	1E	**SGP**	0	3	SECAM GATE POSITION ADJUSTMENT	00														
	1F	**SID**	1	1	SECAM SENSITIVITY SWITCH	01														
	20	**SIH**	0	1	SECAM INHIBITION SWITCH	00														
	21	**STP**	0	1	Y BLACK LEVEL SETUP FOR PAL PLUS	00														
	22	**ASW**	2	1	AUTO VIDEO SELECT MODE SW	02														
	23	**WSH**	0	3	SHARPNESS GAIN STEP FOR NOISE REDUCTION	00														
	24	**WCO**	0	3	Cb/Cr OUTPUT LEVEL STEP FOR NOISE REDUCTION	00														
	25	**CB2**	7	7	Cb2 OFFSET ADJUSTMENT (YCbCr2 INPUT)	07														
	26	**CR2**	7	7	Cr2 OFFSET ADJUSTMENT (YCbCr2 INPUT)	07														
	27	**HPH**	0	1	HS OUTPUT PHASE SWITCH	00														
	28	**VPH**	0	0	SWITCH FOR VP OUTPUT PHASE	00														
	29	**NCM**	0	1	NTSC COMB	00														

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	Dynamic	Standard/Drama	Hi-Fine/Soft	Personal	Device Name
Category	No.	Name									
AP	00	**BAS**	13	1F	BASE SOUND MODE CONTROL	13	13	13	13		BH3868FS
	01	**TRE**	12	1F	TREBLE SOUND MODE CONTROL	12	12	12	12		
	02	**BBE**	99	FF	BBE SOUND MODE CONTROL	99	99	99	99		
	03	**SON**	0	1	SURROUND ON/OFF	00					
	04	**SST**	0	1	SURROUND STEREO	00					
	05	**SMO**	0	1	SURROUND MONORAL	00					
	06	**LOP**	0	1	SURROUND EFFECT ENHANCEER	00					
	07	**SUR**	0	7	SURROUND EFFECT	00					

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
MSP	00	**WST**	15	FF	W/G STEREO THRESHOLD	15	MPS3415D
	01	**WBT**	EA	FF	W/G BILINGUAL THRESHOLD	EA	
	02	**WLL**	5	FF	W/G MONAURAL THRESHOLD	05	
	03	**WAC**	1	OF	W/G AGREEMENT COUNT	01	
	04	**WDL**	30	FF	W/G SEARCH DELAY	30	
	05	**NDL**	20	FF	NICAM SEARCH DELAY	20	
	06	**SDL**	10	FF	STEREO STATUS READ DELAY	10	
	07	**AGC**	1	1	AGC SWITCH AUTO/CONSTANT	01	
	08	**REL**	28	3F	AGC GAIN AT CONSTANT MODE	28	
	09	**CRM**	0	1	CARRIER MUTING ON/OFF	00	
	0A	**ACO**	1	1	AUDIO CLOCK OUT ON/OFF	01	
	0B	**FP**	1B	7F	FM PRESCALE FOR NON-M SYSTEM	1B	
	0C	**FPM**	32	7F	FM PRESCALE FOR M SYSTEM	32	
	0D	**FH**	2D	7F	FM PRESCALE FOR HDEV	2D	
	0E	**FHM**	65	7F	FM PRESCALE FOR HDEV AND M	65	
	0F	**WGP**	1C	7F	W/G PRESCALE	2A	
	10	**NIP**	7F	7F	NICAM PRESCALE	6D	
	11	**ERR**	50	FF	AUTO FM SWITCH THRESHOLD	50	

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	TV	Video	Picture Mode				Device Name
Category	No.	Name							Dynamic	Standard/Drama	Hi-Fine/soft	Personal	
LT1	00	**LDH**	1	1	HISTOGRAM SEGMENT SELECTION	01							TDA9178
	01	**CFS**	1	1	CONTOUR FILTER SELECTION	01							
	02	**WLB**	0	1	LETTERBOX WINDOW SWITCH	00							
	03	**VDC**	1	1	VIDEO DEPENDANT CORING				01	01	01	01	
	04	**DEM**	0	1	DEMONSTRATION MODE	00							
	05	**CDP**	4	07	LUMINANCE DELAY	00							
	06	**OSP**	0	1	OVERRULE SMART PEAKING	01							
	07	**WPO**	0	1	WHITE POINT STRETCH OFF	00							
	08	**DSK**	0	1	SKIN TONE SWITCH				00	00	00	00	
	09	**ASK**	0	1	SKIN TONE ANGLE SELECTION	00							
	0A	**WSK**	0	1	SKIN TONE WIDTH SELECTION	00							
	0B	**SSK**	0	1	SKIN TONE SIZE SELECTION	00							
	0C	**DGR**	1	1	GREEN ENHANCEMENT SWITCH				01	01	01	01	
	0D	**DGT**	7	7	THRESHOLD OF GREEN ENHANCEMENT SWITCH	07							
	0E	**GGR**	0	1	GREEN ENHANCEMENT GAIN	00							
	0F	**WGR**	0	1	GREEN ENHANCEMENT WIDTH	00							
	10	**SGR**	0	1	GREEN ENHANCEMENT SIZE	00							
	11	**DBL**	0	1	BLUE STRETCH SWITCH	00							
	12	**GBL**	0	1	BLUE STRETCH GAIN SELECTION	00							
	13	**SBL**	0	1	BLUE STRETCH SIZE SELECTION	00							
	14	**CDS**	1	1	COLOR DEPENDANT SHARPNESS				01	01	01	01	
	15	**CST**	7	7	THRESHOLD OF COLOR DEPENDANT SHARPNESS	07							
	16	**CT1**	0	1	COLOR TRANSIENT IMPROVEMENT				00	00	00	00	
	17	**BON**	0	1	BLACK OFFSET COMPENSATION				00	00	00	00	
	18	**BTD**	0	3F	ADAPTIVE BLACK STRETCH				00	00	00	00	
	19	**NLD**	15	3F	NON-LINEARITY AMPLIFIER				15	15	15	15	
	1A	**NLW**	7	7	STEP WIDTH OF NON-LINEARITY AMPLIFIER	04							
	1B	**VGD**	15	3F	VARIABLE GAMMA				15	15	15	15	
	1C	**VGW**	0	7	STEP WIDTH OF VARIABLE GAMMA	00							
	1D	**PKD**	3F	3F	PEAKING AMPLITUDE				3F	3F	3F	3F	
	1E	**PKW**	8	0F	STEP WIDTH OF PEAKING AMPLITUDE	08							
	1F	**SPD**	0	3F	STEEPNESS CORRECTION				00	00	00	00	
	20	**CRD**	11	3F	CORING LEVEL				11	11	11	11	
	21	**CRW**	9	0F	STEP WITH CORING LEVEL	09							
	22	**CRO**	0	0F	CORING LEVEL OFFSET FOR VIDEO MODE	09							
	23	**LWD**	1F	3F	LINE WIDTH CORRECTION	1F							
	24	**SNM**	0	7	S/N MODE UNDER UNRELIABLE S/N CONDITION	01							
	25	**SNC**	3	OF	S/N RATIO AVERAGE COUNTER		03	03					
	26	**FMC**	2	OF	FEATURE MODE MATCHING COUNTER	02							

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
DRC	00	**MOD**	0	3	DRC MODE (FOR EVALUATION ONLY) 00-NORMAL, 01-FORCED 1250I, 02-FORCED PROGRESSIVE, 03-FORCED SIMPLE PROGRESSIVE	00	

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	TV	Video	NR Mode				Picture Mode				Device Name
Category	No.	Name							NR mode 0	NR mode 1	NR mode 2	NR mode 3	Dynamic	Standard/Drama	Hi-Fine/soft	Personal	
3CM	00	**FRZ**	0	1	EXTERNAL MEMORY TEST BIT	00								00	00	00	UPD64082
	01	**NRM**	0	3	NOISE REDUCTION OPERATION MODE	00								00	00	00	
	02	**YCO**	0E	0F	Y/C SIGNAL OUTPUT SELECTION	0E								0E	0E	0E	
	03	**SYC**	1	3	SYSTEM CLOCK SELECTION	01								01	01	01	
	04	**STD**	0	3	STANDARD/NON-STANDARD OPERATION SELECTION	00								00	00	00	
	05	**MSS**	0	3	INTER-FRAME/INTER-LINE OPERATION SELECTION	00								00	00	00	
	06	**KIL**	3	3	KILLER/NON-KILLER OPERATION SELECTION	03								03	03	03	
	07	**EAD**	0	1	EXTERNAL Y-ADC SWITCH	00								00	00	00	
	08	**ECS**	1	3	EXTERNAL C-SYNC INPUT SELECTION	01								01	01	01	
	09	**CPP**	2	3	ADC INPUT LEVEL & CLUMP PULSE WIDTH SELECTION	02								02	02	02	
	0A	**PWR**	0	1	ADC INPUT WIDTH SWITCH	00								00	00	00	
	0B	**HDP**	5	7	HORIZONTAL PHASE ADJUSTMENT	05								05	05	05	
	0C	**CDL**	4	7	C-SIGNAL DELAY ADJUSTMENT	04								04	04	04	
	0D	**DYC**	2	0F	DY DETECTION CORING LEVEL ADJUSTMENT				02	02	02	02		02	02	02	
	0E	**DYG**	0A	0F	DY DETECTION GAIN ADJUSTMENT				0A	0A	0A	0A		0A	0A	0A	
	0F	**DCC**	5	0F	DC DETECTION CORING LEVEL ADJUSTMENT				05	05	05	05		05	05	05	
	10	**DCG**	5	0F	DC DETECTION GAIN ADJUSTMENT				05	05	05	05		05	05	05	
	11	**YNR**	1	0F	YNR NON-LINEAR FILTER SETUP	01								01	01	01	
	12	**CNR**	1	0F	CNR NON-LINEAR FILTER SETUP	01								01	01	01	
	13	**WSC**	1	3	NOISE DETECTION CORING ADJUSTMENT	01											
	14	**VTH**	1	3	HYSTERESIS SELECTION FOR H-SYNC NON-STANDARD		01	01									
	15	**VTR**	1	3	SENSITIVITY SELECTION FOR H-SYNC NON-STANDARD		01	01									
	16	**LDR**	2	3	SENSITIVITY SELECTION FOR FRAME-SYNC NON-STANDARD		02	02									
	17	**VAP**	3	7	GAIN ADJUSTMENT FOR VERTICAL SHAPE CORRECTION								03	03	03	03	
	18	**VAI**	0C	1F	VANISHING ADJUSTMENT FOR VERTICAL SHAPE CORRECTION								0C	0C	0C	0C	
	19	**TST**	0	1	TEST BIT	00											
	1A	**YPF**	3	3	CENTER FREQUENCY SELECTION FOR Y-PEAKING BPF								03	03	03	03	
	1B	**YPG**	8	0F	GAIN ADJUSTMENT FOR Y-PEAKING BPF								08	08	08	08	
	1C	**VSE**	OA	0F	LINE COMB FILTER SETUP	00											
	1D	**CCN**	0	1	C-SIGNAL SPLIT FILTER SWITCH	00											
	1E	**COS**	0	1	C-SIGNAL DELAY SWITCH AT NOISE REDUCTION	00											
	1F	**SDC**	0	1	DC DETECTION SENSITIVITY SWITCH	00											
	20	**SDY**	1	1	DY DETECTION LOWER-LEVEL SENSITIVITY SWITCH	00											
	21	**D2G**	4	7	D2 GAIN SELECTION	00											
	22	**YHC**	0	3	Y-SIGNAL HIGHER-LEVEL CORING SELECTION								00	00	00	00	
	23	**YHG**	0	1	Y-SIGNAL HIGHER-LEVEL GAIN SWITCH								00	00	00	00	
	24	**SHT**	0	0F	NON-STANDARD DETECTION & H/V COUNTER TEST BITS	00											
	25	**CLK**	8	0F	CLOCK TEST BITS	00											
	26	**PLL**	0D	0F	PLL FILTER SETUP	00											
	27	**KRF**	3	0F	KILLER DETECTION REFERENCE ADJUSTMENT	00											
	28	**HSL**	0C	0F	H-SYNC SLICE LEVEL ADJUSTMENT	01											
	29	**VSL**	8	0F	V-SYNC SLICE LEVEL ADJUSTMENT	00											
	2A	**BPS**	4	0F	INTERNAL BURST GATE START POSITION ADJUSTMENT	1A											
	2B	**BPW**	0A	0F	INTERNAL BURST GATE WIDTH POSITION ADJUSTMENT	2C											
	2C	**ADC**	3	3	ADC CLOCK DELAY SELECTION	03											
	2D	**APD**	1	1	ADC POWER-DOWN SWITCH	01											
	2E	**NSD**	1	1	NON-STANDARD DETECTION TEST BIT	01											
	2F	**SPD**	2	3	MEMORY POWER-DOWN SWITCH	02											
	30	**CNT**	0	1	CNR TEST BIT	00											

Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
TXT	00	TXH	1	3	TELETEXT HORIZONTAL POSITION FOR PHILIPS	01	SAA5261
	01	TXV	0	7	TELETEXT VERTICAL POSITION FOR PHILIPS	01	

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
OPM	00	OSH	12	3F	OSD H POSITION	0C	CXP750096
	01	FW1	0	3F	OSD ODD/EVEN FIELD WINDOW SETUP #1	0C	OPTION-MISC
	02	FW2	3	3F	OSD ODD/EVEN FIELD WINDOW SETUP #2	0C	
	03	**COM**	0	03	COMB OPERATION SELECTION	02	
	04	**APC**	1	1	APC SWITCH	00	
	05	**TSY**	0	03	TV SYSTEM SELECTION UNDER SEARCHING WITH AUTO TV SYSTEM	00	
	06	**MUT**	0	1	NO SIGNAL MUTE	01	
	07	**AFM**	1	1	AUTO FM SWITCH	01	
	08	TVO	3	7	V-ANGLE CORRECTION TO PICTURE ROTATION	03	
	09	DBL	0	1	DISABLE BLUEBACK FUNCTION	00	
	0A	**SSO**	1	3	SPEED CH SEARCH SELECTION	00	
	0B	TRP	0	3F	MPEG/JPEG NOISE REDUCTION FOR EACH INPUT	00	
	0C	SCH	1	7F	CH SELECTION FOR SHIPPING CONDITION	01	
	0D	SCA	1	1	CABLE/AIR SELECTION FOR SHIPPING CONDITION	01	
	0E	VSN	0	1	ENABLE NOISE REDUCTION IN VIDEO MODE	00	
	0F	PSQ	0	1	POWER SEQ FOR CONTINUOS SIRCS DETECTION SPEC	00	

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
OPB	00	OP1	E7	FF	OPTION BITS 1 (SEE THE SPECIFIED SHEET)	E7	OPTION-BITS
	01	OP2	17	FF	OPTION BITS 2 (SEE THE SPECIFIED SHEET)	32	

Abbreviation

VC = V-Compressed Mode NC = Non-compressed Mode ECO = Eco Mode
Sur = Surround NR = Noise Reduction

NOTE

- shaded items are fixed data.
- no data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data: The data indicated in the initial colomn are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory. In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

OPTION NOTE

COM Comb Operation Selection
00 = No comb used,
01 = Multi-Standard comb,
02 = 3D comb (NTSC Models only)
03 = Illegal, Do not use

TSY TV System Selection for Auto TV System 00 = B/G, 01 = I, 10 = D/K, 11 = M

SSO Speed CH Search Selection 00 = normal, 01 = 4 times, 10 = 6 times, 11 = 8 times

TRP MPEG/JPEG Noise Reduction

Input	–	–	TV	Video 1	Video 2	Video 3	Video 4	DVD

OP1 Items

Item	TOP	NICAM	HDEV	Thai Bilingual	Sleep Mode	DVD In	AV Input		HEX
KV-EX29M61	0	1	1	0	1	1	1	1	6F

AV Input 00 = no AV Input, 01 = 1 AV Input, 10 = 3 AV Input, 11 = 4 AV Input

OP2 Items

Item	PiP Models	Korean Stereo	Vid NTSC3.58	A-TV sys	US Stereo	Chinese	Arabic	Thai	HEX
KV-EX29M61	0	0	0	1	0	1	1	1	17

Pin P PiP models 0 = No PiP, 1 = PiP 0 = Original (Siemens), 1 = Chinese (Philips)
A-TV sys Auto TV System in Auto Program 0 = disabled, 1 = enabled

OSD Language (Multi)
000 = English only, 100 = English & Chinese
010 = English & Arabic 110 = English, Chinese & Arabic
001 = English & Thai 101 = English, Chinese & Thai
011 = English, Arabic & Thai 111 = English, Chinese, Arabic & Thai

NOTE

No.	Modes	Details	Entry Conditions
1.	50NC/60NC	Signal 50/60Hz Non-Compressed mode.	Input 50Hz(PAL)/60Hz(NTSC), wide mode OFF (TV/video mode)
2.	50VC/60VC	Signal 50/60Hz V-Compressed mode.	Input 50Hz(PAL)/60Hz(NTSC), wide mode ON (TV/Video mode)
3.	ECO ON/OFF NC	Eco modeON/OFF Non-Compressed mode.	ECO mode ON/OFF, wide mode OFF
4.	ECO ON/OFF VC	ECO mode ON/OFF V-Compressed mode.	ECO mode ON/OFF, wide mode ON
5.	50/60 DVD	Signal 50/60Hz Digital Video Disk	Input 50Hz(PAL)/60Hz(NTSC), DVD
6.	Multi Comb	Multi Comb Filter	Input PAL, NTSC 3.58, Service mode category OPM 03 COM 01 (Multi Model only)
7.	3D Comb	3 Dimensional Comb Filter	Input NTSC 3.58 only, Service mode category OPM 03 COM 02 (NTSC model only)
8.	S-Input	S-Video Input	Connect S-Video Cable, video mode

7-3. PICTURE QUALITY ADJUSTMENTS

PICTURE ADJUSTMENT

1. Set to service mode.
2. Set A/V control to HI-FINE.
3. Set the following condition.

Adjustment condition

SAJ	00	PIC	3F
	06	DYC	00
	0E	CLO	06
	10	HUO	07
JGL	04	BBT	00
	05	LML	03

ECO MODE : OFF
WIDE MODE : OFF
DRC-MF : DRC1250

MEASUREMENT POINT

VR : R100 (the pin 6 of CN1100)
VB : B100 (the pin 7 of CN1100)

CAUTION
After Adjustment, these adjustment parameters must be recovered to the original condition.

Original Condition

SAJ	00	PIC	28	HI-FINE
	06	DYC	0	HI-FINE

	50 TV	50 VIDEO	60 TV	60 VIDEO
0E CLO	09	08	09	09
1O HUO	08	08	09	09

JGL	04	BBT	03
	05	LML	00

1. DRIVE ADJUSTMENT (VIDEO MODE)

Input signal : PAL Color bar, to Video 1 [Service] mode.

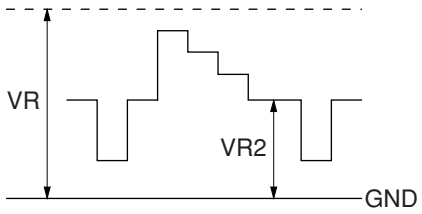
(i) SUB CONTRAST
Condition : SAJ 00 PIC 3F
02 COL 00
JGL 01 RGB 04
Adjusting parameter:
YCT 08 YOL

2. DRIVE ADJUSTMENT (RF MODE)

Input signal : PAL Color bar HI-FINE Mode.

(i) SUB CONTRAST
Condition : SAJ 00 PIC 3F
02 COL 00
JGL 01 RGB 04
Adjusting parameter:
YCT 04 SCT

(ii) Copy SCT data to NTSC (RF MODE)



VR1 - VR2 = VR = 2.35 ± 0.07 (Vp-p)

SUB HUE/COL ADJUSTMENT

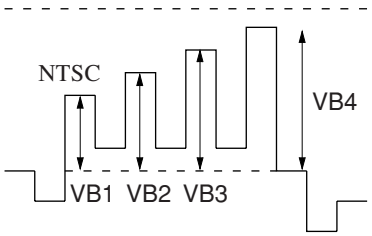
1. SUB HUE/SUB COL (VIDEO MODE)

Input signal : NTSC Color bar HI-FINE Mode.
Condition : SAJ 02 COL 1F
JGL 01 RGB 07
SAJ 10 HUO 07
Adjusting parameter:
YCT 0A COL
YCT 00 TNT

After the adjustment SAJ 10 HUO 9

2. SUB HUE/SUB COL (NTSC RF MODE)

Input signal : NTSC Color bar.
Condition : SAJ 02 COL 1F
JGL 01 RGB 07
SAJ 10 HUO 07
Adjusting parameter:
YCT 03 SCL
YCT 00 TNT

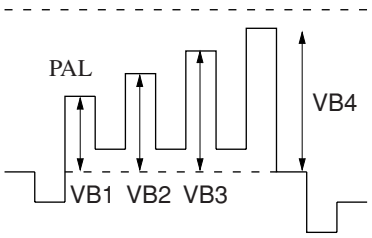


VB1 = VB4 ± 70 mV
VB2 = VB3 ± 70 mV

3. SUB COLOR ADJUSTMENT (PAL RF MODE)

Input signal : RF PAL Color bar HI-FINE Mode.

Condition : SAJ 02 COL 1F
JGL 01 RGB 07
Adjusting parameter:
YCT 03 SCL



VB1 = VB2 = VB3

7-4. DEFLECTION ADJUSTMENTS

FOR DRC 1250 (50Hz) MODE

1. Set to Service Mode.
2. Input a Pal cross hatch/dot signal.
3. Set the following condition.
   Picture Mode to [DYNAMIC], Picture Rotation to [+/−0] and Eco Mode to OFF.
4. Set to DRC-MF1250 mode.
5. Using the [1] and [4] button, select category GEO (Service Mode).
6. Raise/lower the data using the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.

   Service Item

GEO :	00	VSZ	V SIZE
	01	VPS	V POSITION
	02	VLN	V LINEARITY
	03	SCO	S CORRECTION
	04	HSZ	H SIZE
	06	PAP	PIN AMP
	07	UPN	UPPER CORNER PIN
	08	LPN	LOWER CORNER PIN
	09	TRZ	TRAPEZIUM
	0A	AGL	AFC ANGLE
	0B	BOW	AFC BOW

7. Using the [1] and [4] buttons select category DAC (Service Mode).
8. Select and ad List the following items to obtain optimum image. Raise/lower the data with the [3] and [6] buttons.Select and adjust the following items to obtain optimum image.

   Service Item

DAC:	01	HLN	H LINEARITY
	04	HTR	HORIZONTAL TRAPEZIUM
	05	PBA	PIN UNBALANCE

9. Select “GEO 04 HSZ” with the [1] and [4] buttons.
10. Confirm the H Size condition. If necessary, adjust the H Size to get a best condition.
11. Write into the memory by pressing [MUTING] then [0] on the remote commander.

FOR WIDE MODE, DRC1250 (50Hz)

12. Adjust condition change to WIDE MODE : ON.
13. COPY (item FOR DRC 1250 (50Hz) MODE and adjust data for the following items.

    Service Item

GEO :	00	VSZ	V SIZE
	01	VPS	V POSITION
	04	HSZ	H SIZE

14. Adjust V Blanking the following items.

    Service Item

GEO :	13	VAS	V ASPECT
	14	VSC	V SCROLL

15. Adjust the following items.

    Service Item

GEO :	02	VLN	V LINEARITY
	03	SCO	S CORRECTION
	05	HPS	H POSITION
	06	PAP	PIN AMP
	07	UPN	UPPER CORNER PIN
	08	LPN	LOWER CORNER PIN
	09	TRZ	TRAPEZIUM
	0A	AGL	AFC ANGLE
	0B	BOW	AFC BOW
DAC :	01	HLN	H LINEARITY
	04	HTR	HORIZONTAL TRAPEZIUM
	05	PBA	PIN UNBALANCE

16. Repeat step 5 and 6.

FOR DRC 1250 (60Hz) MODE

17. Input 525/60Hz signal.
18. Set to DRC-MF : 1250
19. COPY "DAC 00 HCT (DRC 1250, 50Hz)"
    to
    "DAC 00 HCT (DRC 1250, 60Hz)"
20. Adjust the Service Item listed in no. 6 and no. 8.

FOR WIDE MODE, DRC 1250 (60Hz)

21. Set to WIDE MODE : ON
22. Using the [1] and [4] buttons select category GEO (Service Mode).
23. Select and adjust the following items to obtain optimum image.
    Raise/lower the data with the [3] and [6] buttons.

GEO	00	VSZ	V SIZE
	01	VPS	V POSITION
	04	HSZ	H SIZE

24. Adjust V Blanking for the following items

GEO	13	VAS	V ASPECT
	14	VSC	V SCROLL

25. Adjust the Service Item listed in no.15.
26. Repeat step 5 and 6
27. Input a NTSC cross hatch/dot signal and repeat all above steps.

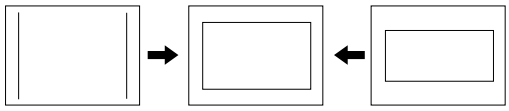
7-5. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the items with fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers “OPB00” (OP1), “OPB01” (OP2) and respectively set the bit per model with command buttons [3] and [6].
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory.
   (This will also cancel Service Mode.)

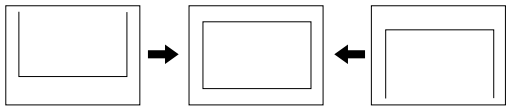
7-6. PICTURE DISTORTION ADJUSTMENT (1)

Item Number 00 – 0B

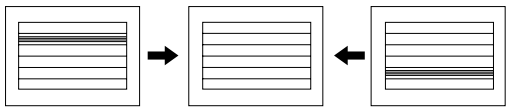
GEO 0 VSZ (V SIZE)



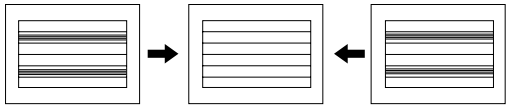
GEO 1 VPS (V POSITION)



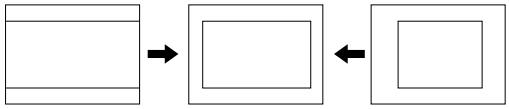
GEO 2 VLN (V LINEARITY)



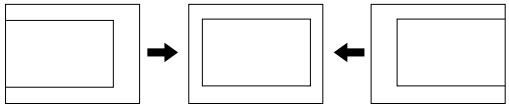
GEO 3 SCO (VERTICAL S-Correction)



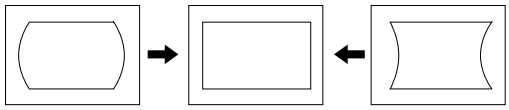
GEO 4 HSZ (H SIZE)



GEO 5 HPS (H POSITION)

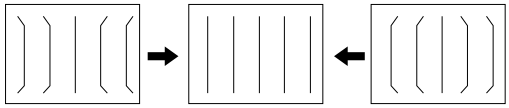


GEO 6 PAP (PIN AMP)

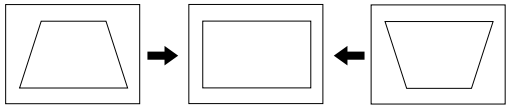


GEO 07 UPN (UPPER CORNER PIN)

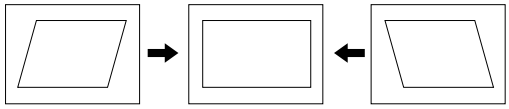
GEO 08 LPN (LOWER CORNER PIN)



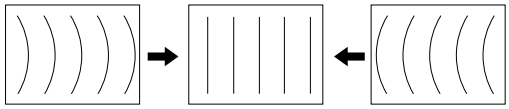
GEO 9 TRZ (TRAPEZIUM)



GEO 0A AGL (AFC.ANGLE)

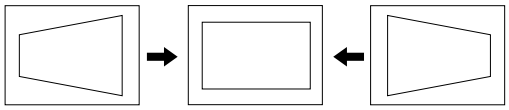


GEO 0B BOW (AFC.BOW)



PICTURE DISTORTION ADJUSTMENT (2)

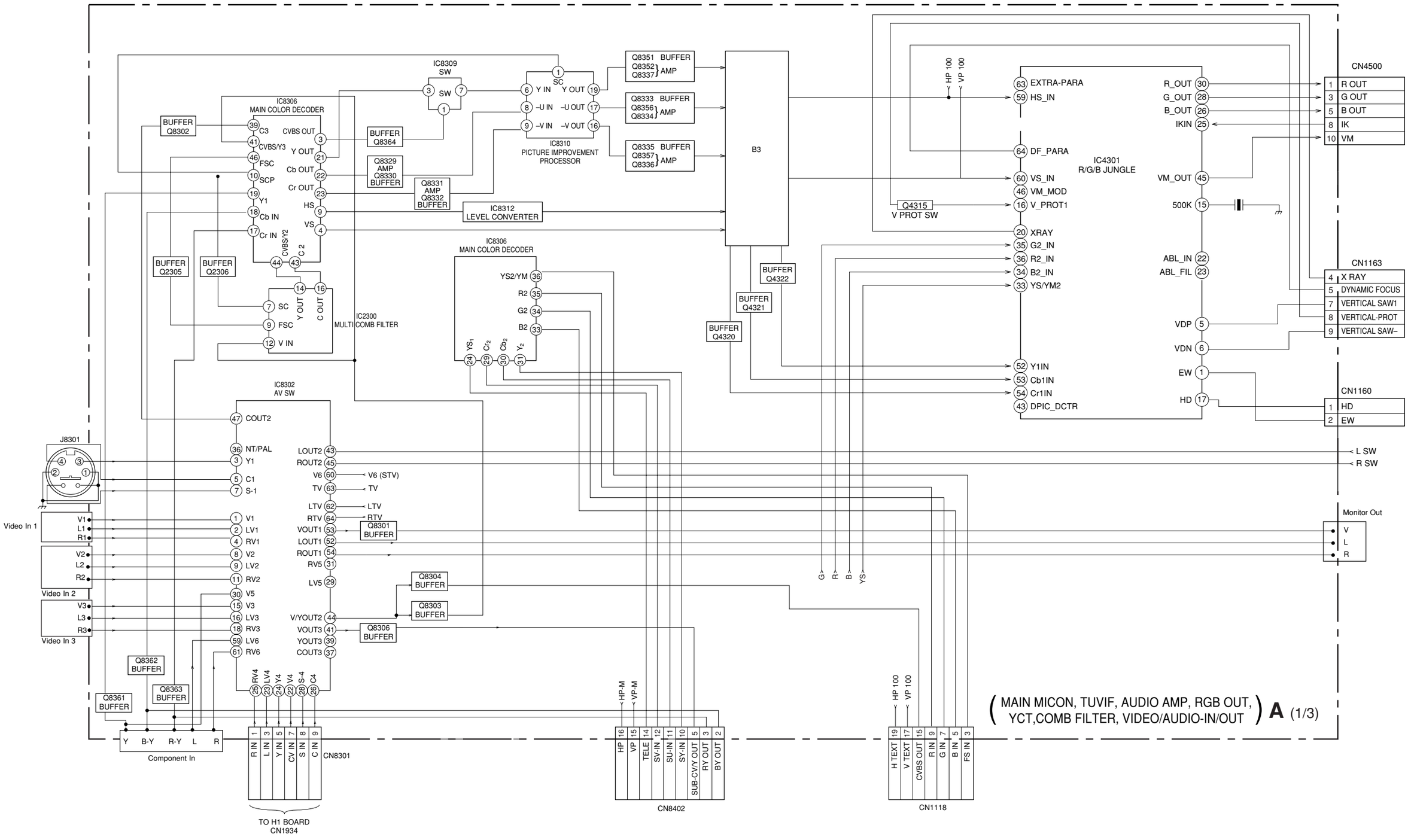
H-TRAPEZOID (DAC 4 HTR)

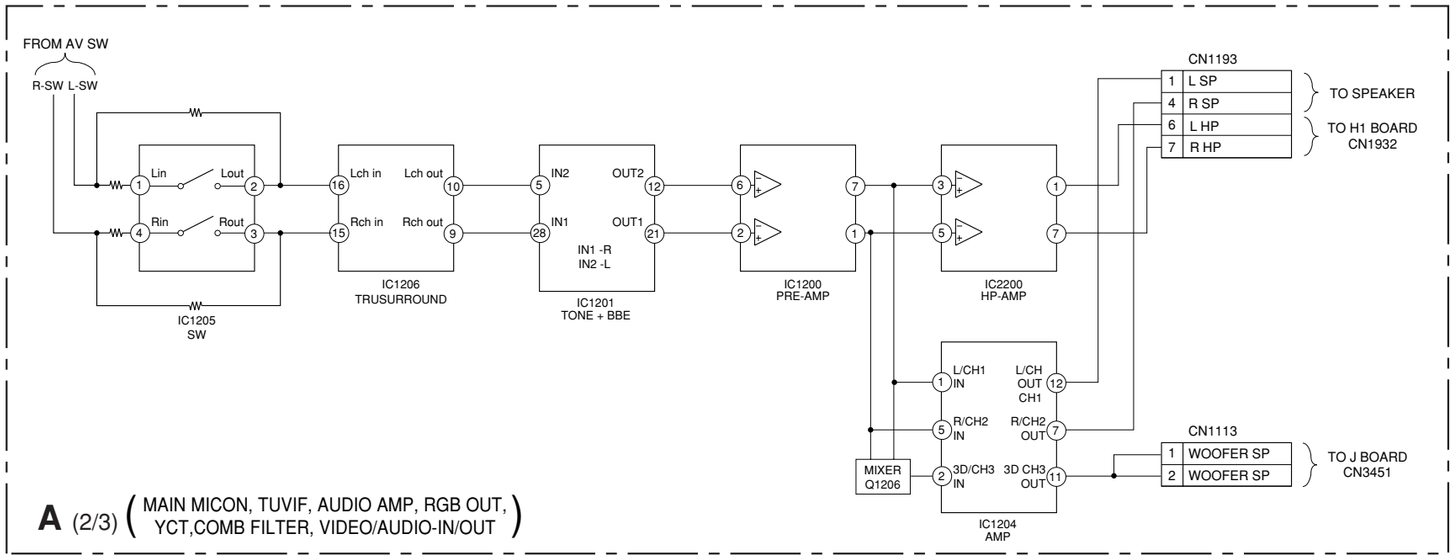


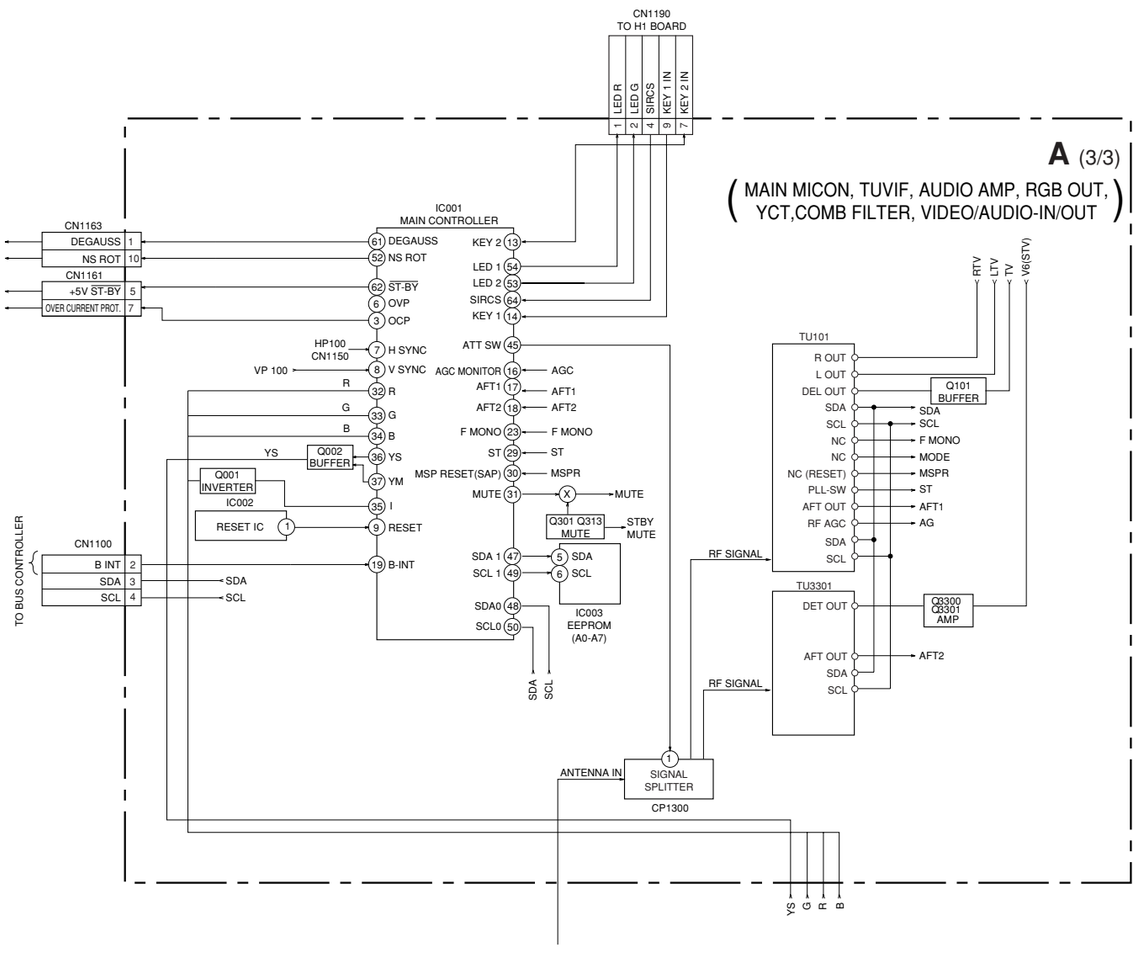
MEMO

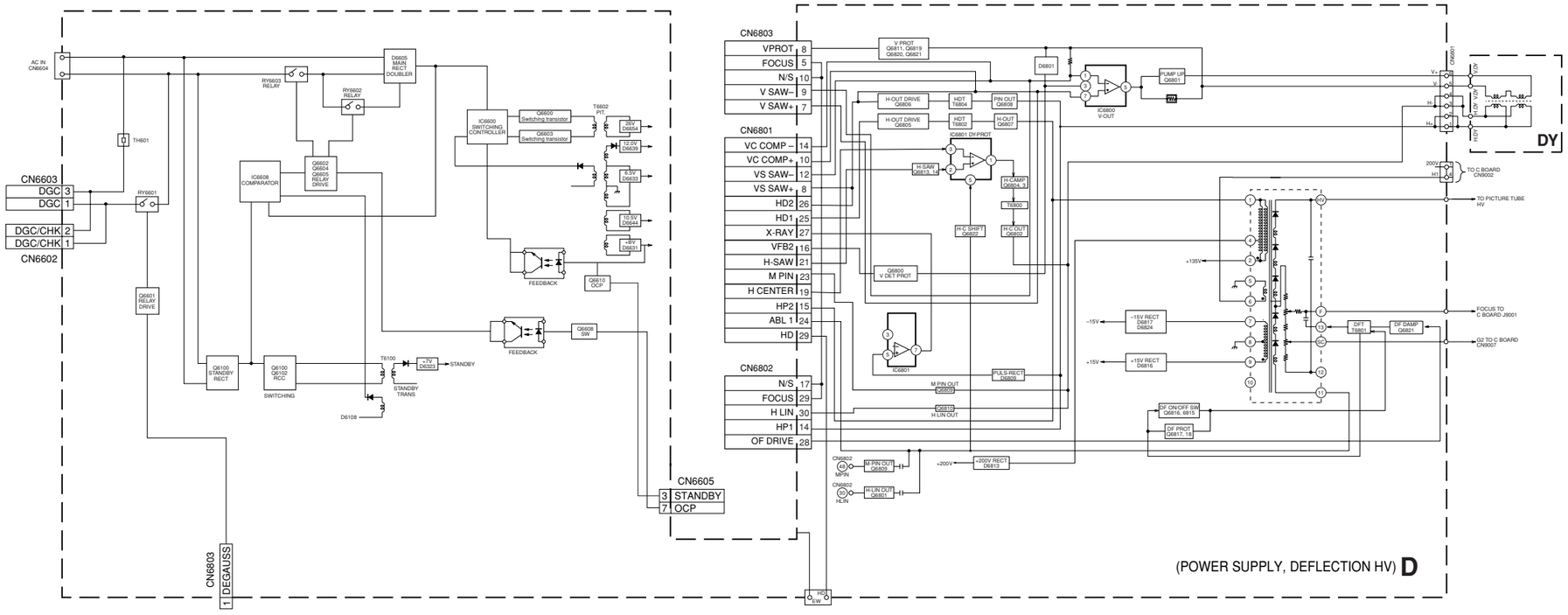
SECTION 8
DIAGRAMS

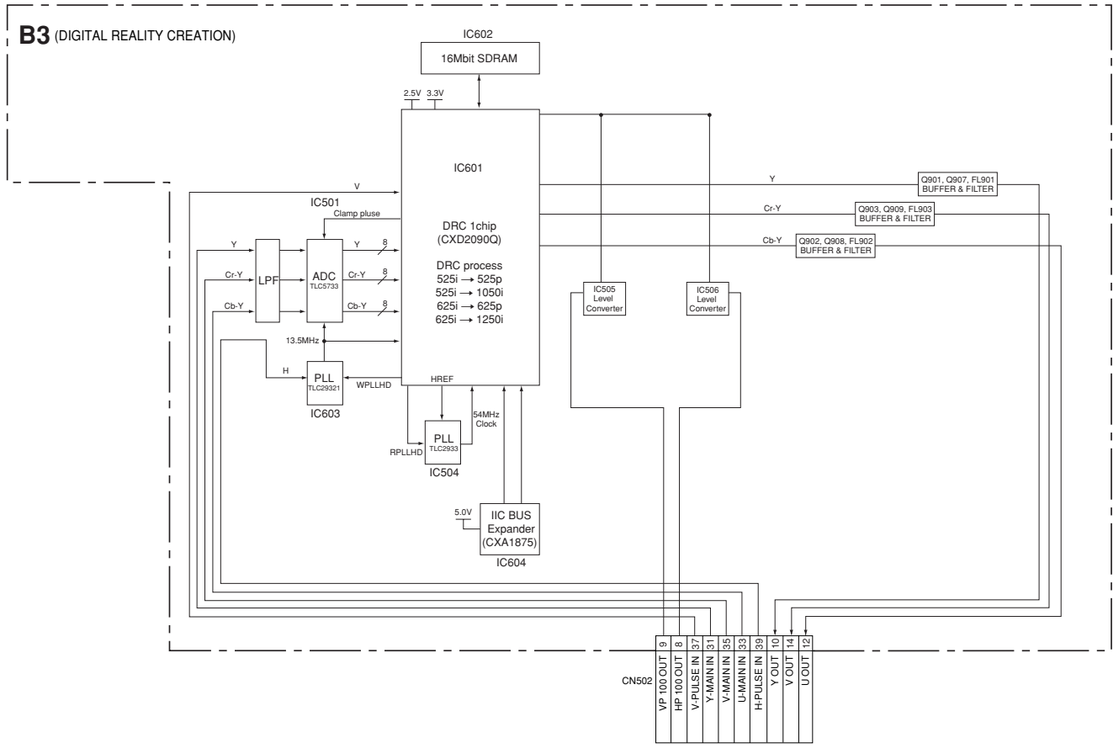
8-1. BLOCK DIAGRAM

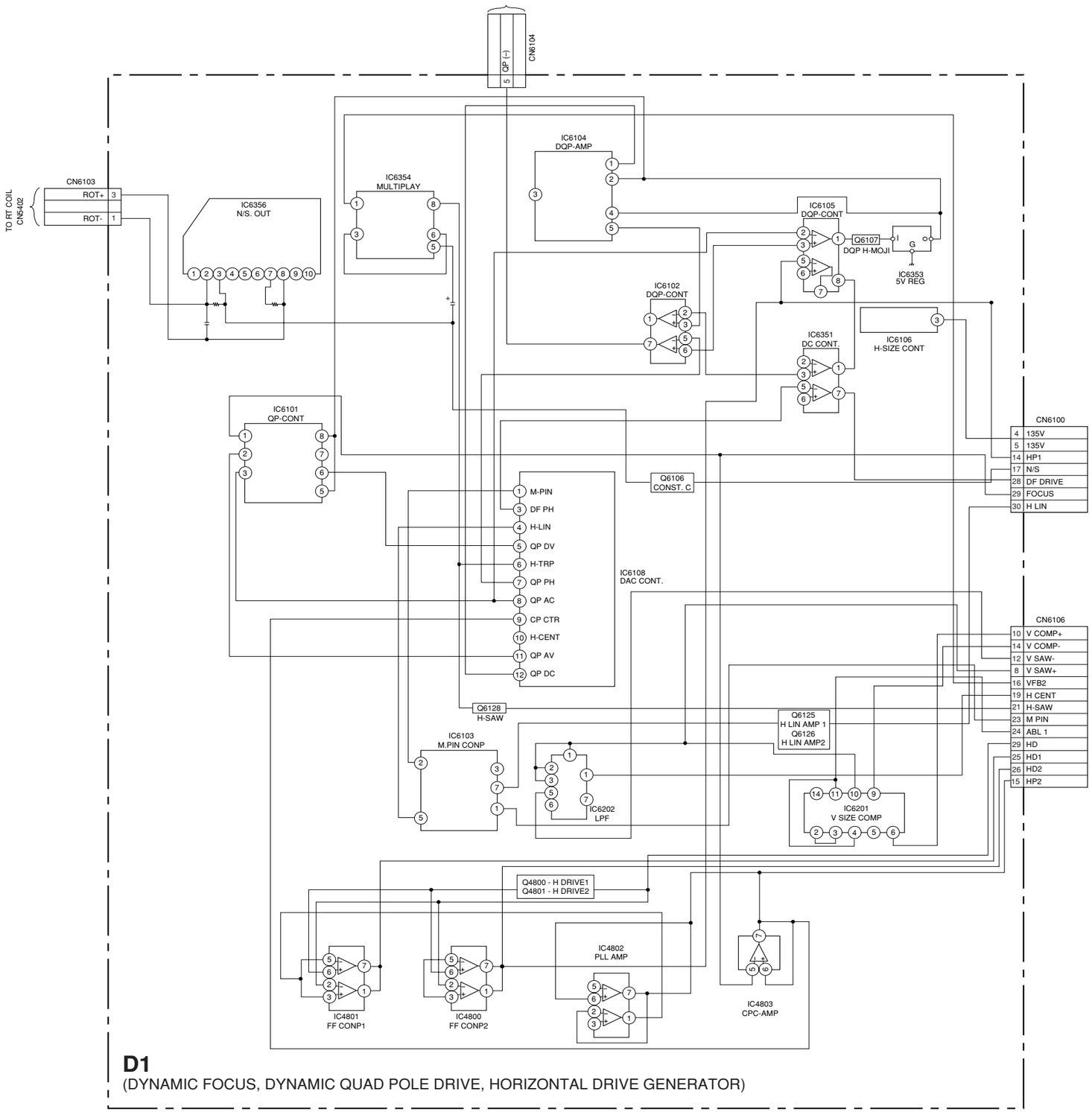



FROM AV SW
R-SW L-SW
Lin
Lout
Rin
Rout
IC1205
SW
Lch in
Lch out
Rch in
Rch out
IC1206
TRUSURROUND
IN2
OUT2
IN1
OUT1
IN1 -R
IN2 -L
IC1201
TONE + BBE
IC1200
PRE-AMP
IC2200
HP-AMP
CN1193
1 L SP
4 R SP
6 L HP
7 R HP
TO SPEAKER
TO H1 BOARD
CN1932
L/CH1 IN
L/CH OUT CH1
R/CH2 IN
R/CH2 OUT
3D/CH3 IN
3D CH3 OUT
MIXER
Q1206
IC1204
AMP
CN1113
1 WOOFER SP
2 WOOFER SP
TO J BOARD
CN3451
A (2/3) (MAIN MICON, TUVIF, AUDIO AMP, RGB OUT, YCT,COMB FILTER, VIDEO/AUDIO-IN/OUT)


CN1190
TO H1 BOARD
1 LED R
2 LED G
4 SIRCS
9 KEY 1 IN
7 KEY 2 IN
A (3/3)
(MAIN MICON, TUVIF, AUDIO AMP, RGB OUT, YCT,COMB FILTER, VIDEO/AUDIO-IN/OUT)
IC001
MAIN CONTROLLER
CN1163
DEGAUSS
NS ROT
CN1161
+5V ST-BY
OVER CURRENT PROT.
ST-BY
OVP
OCP
H SYNC
V SYNC
R
G
B
YS
YM
I
RESET
B-INT
KEY 2
LED 1
LED 2
SIRCS
KEY 1
ATT SW
AGC MONITOR
AFT1
AFT2
F MONO
ST
MSP RESET(SAP)
MUTE
SDA 1
SCL 1
SDA0
SCL0
HP100
CN1150
VP 100
Q002
BUFFER
Q001
INVERTER
IC002
RESET IC
Q301 Q313
MUTE
STBY
MUTE
IC003
EEPROM
(A0-A7)
CN1100
B INT
SDA
SCL
TO BUS CONTROLLER
TU101
R OUT
L OUT
DEL OUT
SDA
SCL
NC
NC (RESET)
PLL-SW
AFT OUT
RF AGC
F MONO
MODE
MSPR
ST
AFT1
AG
Q101
BUFFER
RTV
LTV
TV
V6(STV)
RF SIGNAL
TU3301
DET OUT
AFT OUT
AFT2
Q3300
Q3301
AMP
ANTENNA IN
SIGNAL
SPLITTER
CP1300
YS
G
R
B


AC IN
CN6604
TH601
RY6603
RELAY
RY6602
RELAY
D6605
MAIN
RECT
DOUBLER
IC6600
SWITCHING
CONTROLLER
Q6600
Switching transistor
Q6603
Switching transistor
T6602
PIT
+20V
D6634
12.0V
D6638
8.5V
D6633
10.5V
D6644
+8V
D6631
FEEDBACK
Q6610
OCP
IC6608
COMPARATOR
Q6602
Q6604
Q6605
RELAY
DRIVE
CN6603
DGC 3
DGC 1
DGC/CHK 2
DGC/CHK 1
CN6602
RY6601
Q6601
RELAY
DRIVE
Q6100
STANDBY
RECT
Q6100
Q6102
RCC
SWITCHING
T6100
+3V
D6323
STANDBY
STANDBY
TRANS
D6108
FEEDBACK
Q6608
SW
CN6605
3 STANDBY
7 OCP
CN6803
1 DEGAUSS
HDT
EW
CN6803
VPROT 8
FOCUS 5
N/S 10
V SAW– 9
V SAW+ 7
CN6801
VC COMP – 14
VC COMP+ 10
VS SAW– 12
VS SAW+ 8
HD2 26
HD1 25
X-RAY 27
VFB2 16
H-SAW 21
M PIN 23
H CENTER 19
HP2 15
ABL 1 24
HD 29
CN6802
N/S 17
FOCUS 29
H LIN 30
HP1 14
OF DRIVE 28
V PROT
Q6811, Q6819
Q6820, Q6821
H-OUT DRIVE
Q6806
H-OUT DRIVE
Q6805
HDT
T6804
HDT
T6802
PIN OUT
Q6808
H-OUT
Q6807
IC6800
V-OUT
D6801
PUMP UP
Q6801
IC6801 DY-PROT
H-SAW
Q6813, 14
H CAMP
Q6804, 5
T6800
H-C SHIFT
Q6805
H-C OUT
Q6802
Q6806
V DET PROT
IC6801
M PIN OUT
Q6809
H LIN OUT
Q6810
PULS RECT
Q6809
+200V RECT
D6813
+200V
CN6803
48
M PIN
M-PIN OUT
Q6809
CN6802
30
H LIN
H-LIN OUT
Q6801
CN6801
V+
V–
H1
H2
DY
200V
H1
TO C BOARD
CN6002
TO PICTURE TUBE
HV
+135V
–15V
–15V RECT
D6817
D6824
+15V
+15V RECT
D6816
OFF
T6821
DF DAMP
Q6821
FOCUS TO
C BOARD J9001
G2 TO C BOARD
CN6007
DF ON/OFF SW
Q6816, 6815
DF PROT
Q6817, 18
(POWER SUPPLY, DEFLECTION HV) D


B3 (DIGITAL REALITY CREATION)
IC602
16Mbit SDRAM
2.5V 3.3V
IC601
DRC 1chip
(CXD2090Q)
DRC process
525i → 525p
525i → 1050i
625i → 625p
625i → 1250i
V
IC501
Clamp pluse
Y
Cr-Y
Cb-Y
LPF
ADC
TLC5733
8
13.5MHz
H
PLL
TLC29321
WPLLHD
IC603
HREF
54MHz
Clock
PLL
TLC2933
RPLLHD
IC504
5.0V
IIC BUS
Expander
(CXA1875)
IC604
IC505
Level
Converter
IC506
Level
Converter
Q901, Q907, FL901
BUFFER & FILTER
Q903, Q909, FL903
BUFFER & FILTER
Q902, Q908, FL902
BUFFER & FILTER
CN502
9 VP 100 OUT
8 HP 100 OUT
37 V-PULSE IN
31 Y-MAIN IN
35 V-MAIN IN
33 U-MAIN IN
39 H-PULSE IN
10 Y OUT
14 V OUT
12 U OUT



D1
(DYNAMIC FOCUS, DYNAMIC QUAD POLE DRIVE, HORIZONTAL DRIVE GENERATOR)

8-2. SCHEMATIC DIAGRAMS

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

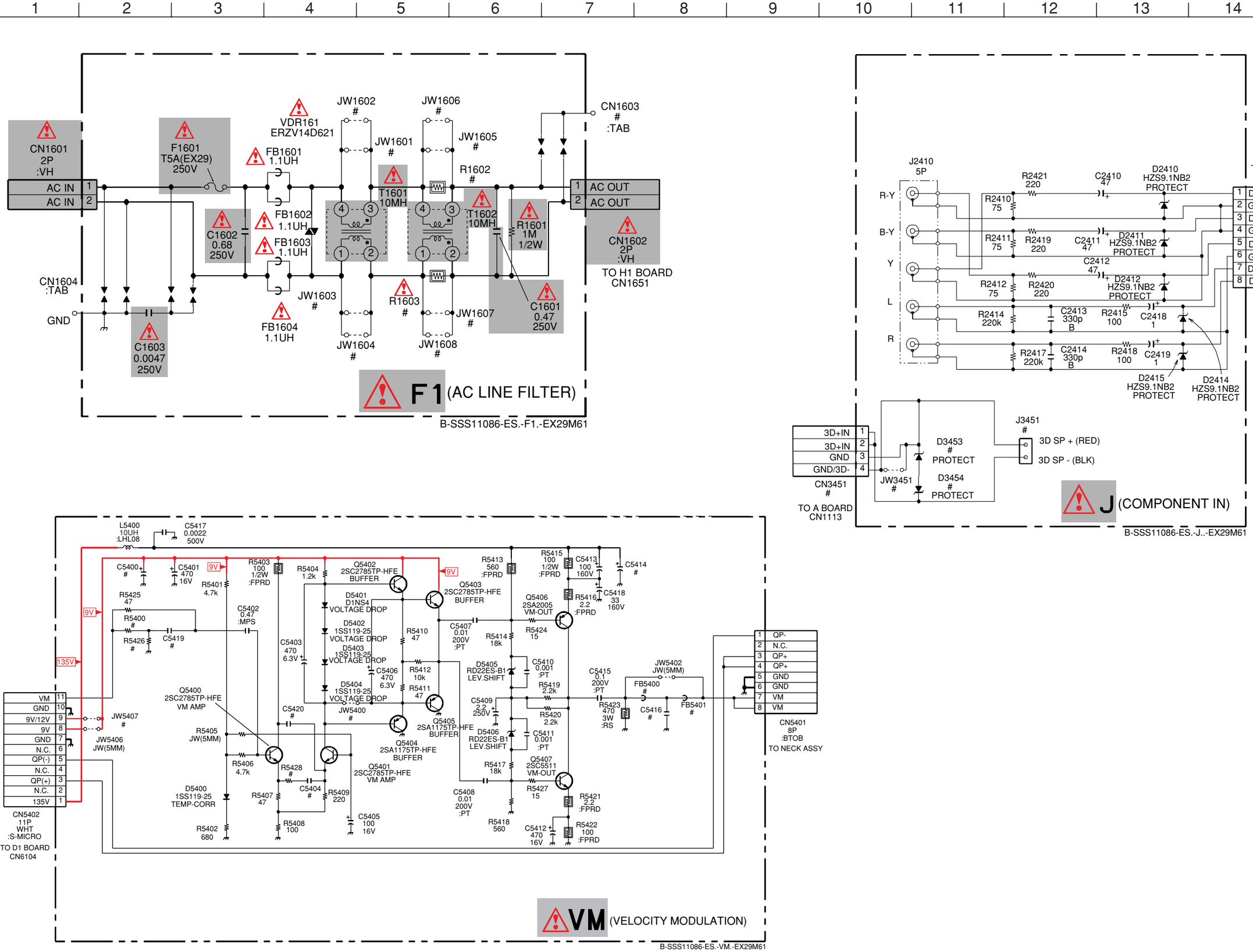
- : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Readings are taken with a color-bar signal input.**
  no mark : COMMON
  Underline : PAL
  ( ) : SECAM
  [ ] : NTSC 3.58
  « » : NTSC 4.43
- **Readings are taken with a 10MΩ digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltages are in V.**
- ✻ **: Cannot be measured.**
- **Circled numbers are waveform references.**
- ▬▬ **: B + bus.**
- ▪ ▪ ▪ ▪ **: B – bus.**
- ⇨ **: signal path.**

Reference information

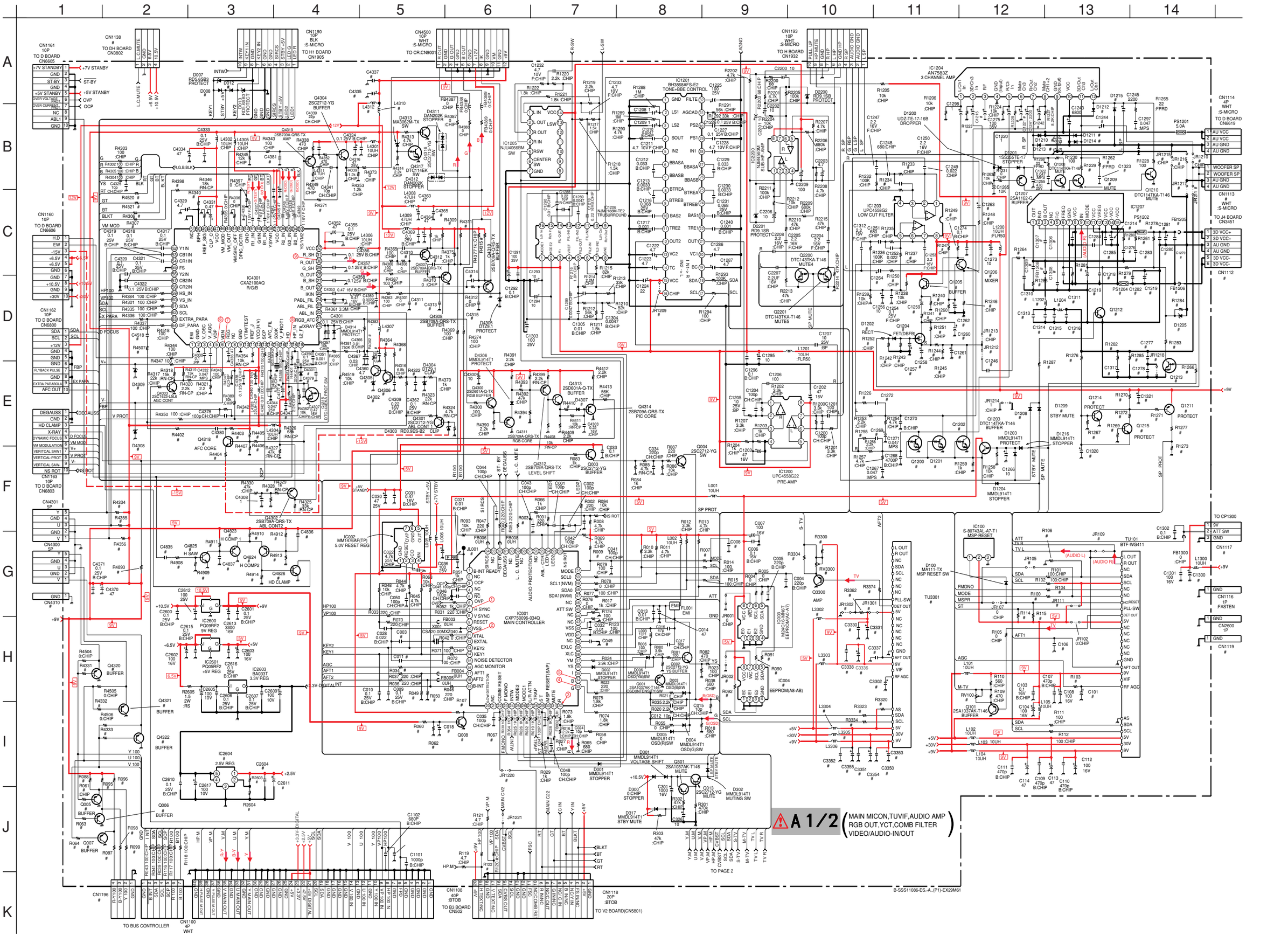
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

(1) Schematic Diagrams of F1, J and VM Boards



(2) Schematic Diagram of A Board



A 2/2

MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTER
VIDEO/AUDIO-IN/OUT

CN8301 10P WHT :S-MICRO
TO H1 BOARD CN1934
R IN 1
GND 2
L IN 3
GND 4
Y IN 5
GND 6
CV IN 7
S IN 8
C IN 9
GND 10

J8301 S TERMINAL
J8302 12P E-86

VIDEO IN 1
L/MONO
AUDIO
VIDEO IN 2
L/MONO
AUDIO
VIDEO IN 3
L/MONO
AUDIO
VIDEO OUT MONITOR
L/MONO
AUDIO
R

IC2300 TDA9181T MULTICOMB FILTER
C OUT
INSEL
Y OUT
DGND
AGND
VDD
V IN
VCC
SYS1
SC
SYS2
FSCSEL
FSC

IC8306 CXA2163Q-T6 COLOR DECODER
C3
APC-FIL
CVBS/Y3
ADD(88H)
C2
CVBS/Y2
COMB SYS
FSC OUT
AFC-FIL
C1
CVBS/Y1
SYNC IN
CVBS OUT(2VPP)
VS
COMB Y
DVDD
D-GND
C-FORCED S
HS
SCP
Y FOR SYNC
SYNC-Vcc
SCL
SDA
YS1
Cr OUT
Cb OUT
Y OUT
APL-FIL
Cb1
Cr1
SYNC-GND
YS3

IC8312 TC7SET08FU-TE85 LEVEL SHIFTER
IN B
IN A
GND
VCC
OUT

IC8309 MM1115XFBE SW
CVIN
GND
VOUT
SW
VCC
YIN
NC

IC8310 TDA9178T/N1.118 PICTURE IMPROVEMENT PROCESSOR
SC
NC
ADEXT1
CF
ADEXT2
SOUT
ADEXT3
VCC
YIN
YOUT
-VIN
-VOUT
ADR
VEE
NC
DEC
SCL
SDA
NC

IC8302 CXA2069Q AV SW
LOUT1
VOUT1
ROUT1
TRAP1
YOUT1
VGND
COUT1
LV6
RV6
LTV
TV
RTV
ADR
RV5
V5
LV5
S-4
S2-4
C4
RV4
Y4
LV4
V4
S-3
S2-3

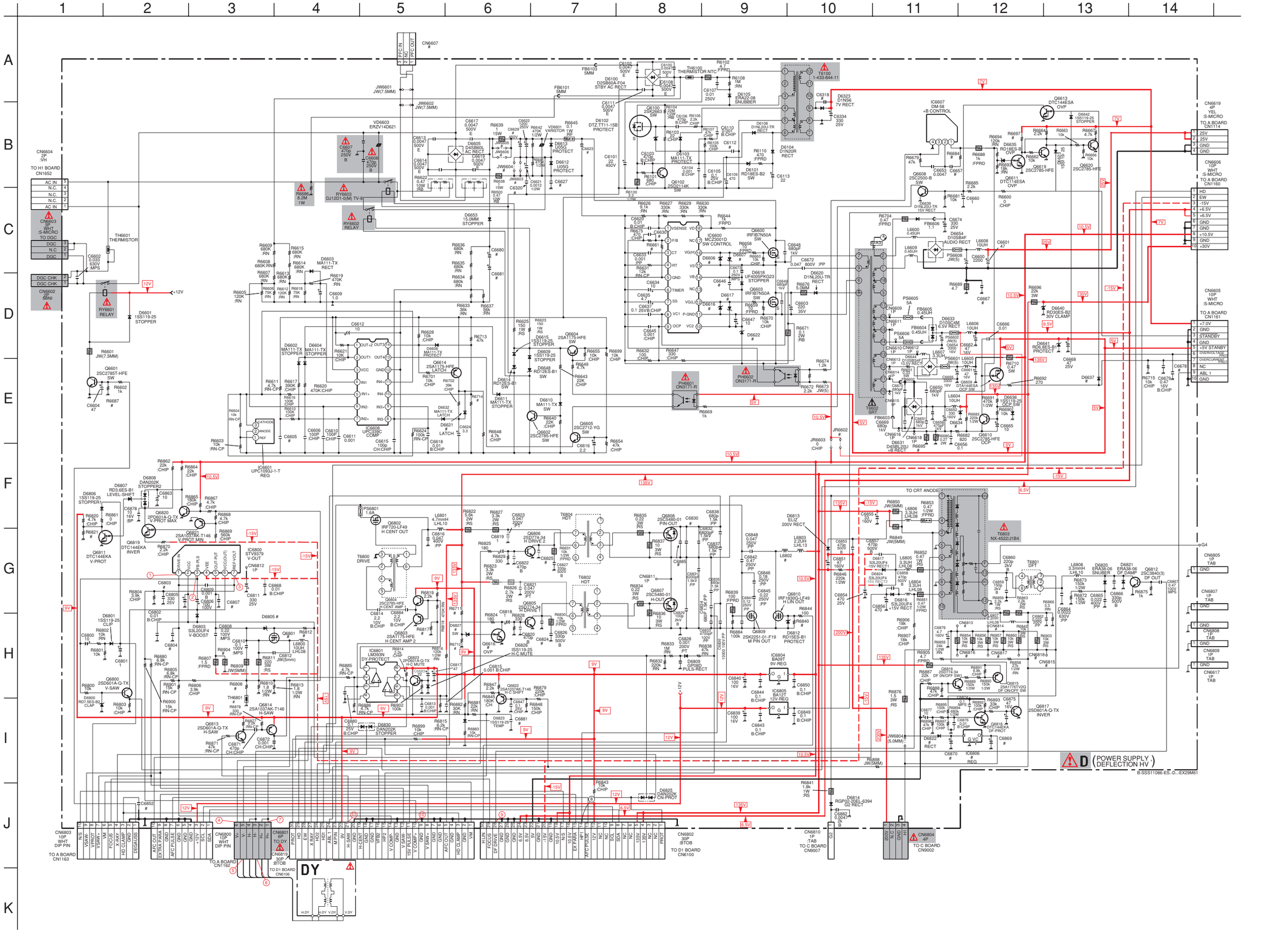
CN8302 8P WHT S:MICRO
TO J BOARD CN2410
Y 1
GND 2
BY 3
GND 4
RY 5
GND 6
L 7
R 8

CN8402 # TO P BOARD CN8801 (TO PIP)
+9V 1
BY OUT 2
RY OUT 3
GND 4
SUB-CV/ Y OUT 5
NC 6
NC 7
GND 8
GND 9
SY-IN 10
SU-IN 11
SV-IN 12
GND 13
SELE 14
VP 15
HP.M 16
GND 17
+5V 18
SDA 19
SCL 20
GND 1

TO PAGE 1

B-SSS11086-ES.-A..(P2)-EX29M61

(3) Schematic Diagram of D Board


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J K
CN6607
JW6601 JW(7.5MM)
JW6602 JW(7.5MM)
CN6604 2P :VH TO H1 BOARD CN1652
AC IN
N.C.
N.C.
AC IN
CN6603 3P WHT :S-MICRO TO DGC
DGC
N.C
DGC
DGC CHK
DGC CHK
CN6602 2P :MINI
TH6601 THERMISTOR
RY6601 RELAY
D6601 1SS119-25 STOPPER
R6601 JW(7.5MM)
Q6601 2SC2785T-HFE SW
R6602 1k
R6687
C6604 47
VD6603 ERZV14D621
C6607 470p 250V B
C6608 4700 250V B
RY6603 DJ12D1-0(M) TV-S
R6686 8.2M 1W
RY6602 RELAY
D6653 15.0MM STOPPER
FB6103 5MM
FB6101 5MM
D6100 D2SB60A-F04 STBY AC RECT
C6102 0.0047 500V E
C6100 0.0047 500V E
C6108 0.0047 500V E
TH6100 THERMISTOR NTC
R6102 4.7 :FPRD
R6108 1M :RN
D6105 ERA22-08 SNUBBER
T6100 1-433-844-11
D6323 D1NS6 7V RECT
C6334 330 25V
C6111 0.0047 500V E
D6102 DTZ,TT11-15B PROTECT
C6617 0.0047 500V E
R6639 1 15W
C6629 # 450V
C6622 1200 250V
R6642 470K 1/2W
VD6601 VARISTOR 1W
R6645 0.1 RF
D6613 U05X3 PROTECT
D6612 U05Q PROTECT
C6627 #
C6623 #
C6613 0.0047 500V E
C6614 0.0047 500V E
C6619 0.0047 500V
JW6605
JW6606
JW6604
JW6603
C6620 #
C6621 0.0012 1/2W
R6638 15W
R6500 0.47 10W RB
R6622 0.47 10W :RPD
C6320 #
R6100 3.3 1/2W
C6101 22 450V
Q6100 2SK2663 SW
R6104 22M 1/2W :RB
R6106 470k B:CHIP
R6106 2.2k :CHIP
R6107 100k :CHIP
C6110 0.001 B:CHIP
C6112 #
R6103 22 :CHIP
D6103 MA111-TX PROTECT
C6103 470p B:CHIP
C6104 0.001 B:CHIP
C6105 0.1 25V B:CHIP
C6109 470
D6101 RD18ES-B2 SW
R6101 680 :CHIP
Q6102 2SB561K SW
D6104 D1N20R RECT
C6113 22
R6110 470 :FPRD
R6626 9.1k :RN
R6627 330k :RN
R6629 330k :RN
R6630 330k :RN
R6644 :FPRD
C6630 0.01 B:CHIP
R6675 470 :CHIP
R6631 # :CHIP
IC6600 MCZ3501D SW CONTROL
Y/SENSE
F/B
CT
RT
GND
TIMER
SS
VC1
OCP
VD
NC
VS
VB
P-GND
VC2
VG(H)
VG(L)
Q6600 IRFIB7N50A SW
C6648 680pF 1kV
C6672 0.047 800V :PP
D6620 D1NL20U-TR RECT
R6676 5.0MM
C6603 220 35V
R6658 10 :FPRD
R6660 10k :CHIP
C6649 680pF 1kV
C6646 #
D6618 UP4005PKG23 STOPPER
Q6603 IRFIB7N50A SW
R6659 10 :FPRD
D6616 #
D6617
C6647 10
R6670 10k :CHIP
D6622 #
C6645 0.001 :CHIP
R6671 0 1W :RB
R6672 2.2k
R6673 JW(5)
R6674 1.2k
PH6601 ON3171-R
PH6602 ON3171-R
R6669 1k
R6632 100 :CHIP
R6647 330 :CHIP
R6625 150 1W :RS
R6623 150 1W :RS
D6615 1SS119-25 STOPPER
Q6604 2SA1175-HFE SW
R6655 10k B:CHIP
R6649 4.7k
R6643 22K :CHIP
D6609 1SS119-25 STOPPER
D6648 RD12ES-B1 SW
D6614 RD12ES-B1 SW
D6611 MA111-TX STOPPER
D6610 MA111-TX SW
R6640 22K :CHIP
Q6602 2SC2785-HFE SW
Q6605 2SC2712-YG SW
C6616 2.2
R6654 47k :CHIP
R6609 680K :RN
R6615 680K :RN
R6608 680K :RN
R6614 680K :RN
D6603 MA111-TX RECT
R6607 680K :RN
R6613 680K :RN
R6619 470K :RN
R6606 75K :RN
R6612 120K :RN
R6618 75K :RN
R6605 120K :RN
C6609 1.0
R6636 680k :RN
R6635 680k :RN
R6634 680k :RN
C6680 #
C6681 #
R6633 36k :RN
R6637 36k :RN
C6612 10
D6602 MA111-TX STOPPER
D6604 MA111-TX STOPPER
R6621 10k :CHIP
R6628 10k :CHIP
D6608 MA111-TX PROTECT
D6614 2SA1175-HFE LATCH
R6701 10k :CHIP
R6702 39k :CHIP
R6713 47k
R6611 4.7k :RN-CP
R6617 390K :CHIP
R6620 470K:CHIP
R6616 100K :CHIP
R6610 100K :CHIP
R6603 :RN-CP
R6604 10k :RN-CP
IC6608 UPC339C COMP
C6605 #
C6606 100P :CHIP
C6610 100P :CHIP
C6611 0.001
C6615 100p CH:CHIP
D6632 MA111-TX LATCH
D6621 # LATCH
C6624 3.3
R6624 100k :RN-CP
C6618 0.01 B:CHIP
R6648 4.7k :CHIP
R6714 #
IC6601 UPC1093J-1-T REG
R6862 22k :CHIP
R6864 22k :CHIP
D6808 RD3.9ES-B2 CLAMP
D6809 DAN202K STOPPER2
D6806 1SS119-25 STOPPER1
D6807 RD3.6ES-B1 LEVEL-SHIFT
C6878 10 16V :BP
C6820 2PD601A-Q-TX V-PROT MAX
C6883 10
R6865 180K :CHIP
R6867 4.7k :CHIP
R6868 4.7k :CHIP
R6869 560k :CHIP
D6821 2SA1037AK-T146 V-PROT MIN
R6820 4.7k :CHIP
R6861 0 :CHIP
R6821 #
Q6819 DTC144EKA INVER
R6870 2.2k :CHIP
IC6800 STV9379 V-OUT
DRIVE-IN
VCC
BI-PLS
HBE
OUT PUT
VCC(OUT)
REF-VOLT
CN6812 1P
C6803 #
C6805 330 25V
C6809 0.001 B
C6806 100V
C6807 #
C6808 0.22 100V :MPS
C6810 0.1 100V :MPS
C6812 JW(5mm)
C6811 330 25V
C6888 0.01 B:CHIP
D6805 #
R6804 3.9k :CHIP
C6802 0.01 B:CHIP
C6804 #
D6801 1SS119-25 CLIP
R6802 10k :RN
R6807 680K :RN
C6801 1
L6800 10UH :LHL08
R6812 #
D6803 S3L20UF4 V-BOOST
R6904 #
R6809 JW(5MM)
R6811 330 25V :RS
R6800 10k :RN
R6880 6.8k :RN-CP
R6805 15k :RN-CP
R6801 15k :RN-CP
R6900 15k :RN-CP
R6806 3.9k :CHIP
R6808 #
R6810 1.8 1/2W :RN
R6813 1.8 1/2W :RN
TH6801 #
R6878 39k :RN-CP
R6877 2.2k :RN-CP
Q6813 2SD601A-Q-TX H-SAW
R6871 47k :RN-CP
C6871 470p CH:CHIP
C6872 0.001 CH:CHIP
D6800 RD7.5ES-B2 CLAP
R6803 10k :CHIP
Q6800 2SD601A-Q-TX V-SAW
Q6814 2SA1037AK-T146 H-SAW
C6852 #
PS6801 1.6A
Q6802 IRFI720-LF49 H CENT OUT
L6801 4.7mmH :LHL10
C6816 0.047 :PP
T6800 DRIVE
C6804 2SC2785-HFE H CENT AMP
C6814 2.2 10V B:CHIP
C6884 2.2 10V B:CHIP
Q6803 2SA1175-HFE H CENT AMP 2
R6817 #
R6819 2.2k :CHIP
R6818 470K:RN
R6711 #
R6712 #
C6827 #
SW
Q6616 #
:OVP
R6824 180
C6818 1
R6828 330
C6820 470p :PT
C6826 330p B
C6824 #
R6814 2.2k :CHIP
R6816 120k 1/2W :RN
C6817 47
C6823 22
IC6801 LM393N DY-PROTECT
R6885 4.7k :RN-CP
R6886 4.7k :RN-CP
R6902 100k
C6880 0.1 25V B:CHIP
D6830 DAN202K STOPPER
R6899 10k :CHIP
C6815 0.001 B:CHIP
C6847 0.1 25V :CHIP
R6847 2.2k
R6845 180K :CH
R6822 2SA1037AK-T146 H-C SHIFT
R6879 220k :CHIP
R6848 150k :CHIP
C6881 #
D6823 1SS119-25 TEMP
R6882 30K :RN
R6883 10k :RN-CP
R6815 6.2k :RN-CP
R6843 10k :CHIP
D6825 DAN202K CN-PROT
R6822 5.6k 2W :RS
R6827 3.3k 2W :RS
C6823 0.047 200V :PT
C6819 1
R6825 180
R6829 330
R6823 3.3k 2W :RS
C6822 470p B
C6825 #
C6827 3300 500V B
Q6806 2SD774-34 H DRIVE 2
T6802 HDT
T6804 HDT
R6831 10k 1/2W :FPRD
C6831 6200pF 1.5kV :PP
C6830 #
R6835 0.22 3W :RS
Q6808 2SC5480-01 PIN-OUT
C6838 680p 1.5K :PP
C6832 680pF 1.2kV :PP
R6837 10 3W :RS
C6837 680p 1.5K :PP
C6885 #
CN6811 1P
R6834 0.22 3W :RS
Q6807 2SC5480-01 H-OUT
R6836 10 3W :RS
C6835 680p 1.5K :PP
C6834 6800pF 1.5kV :PP
Q6810 IRFI 630G-LF49 H LIN OUT
R6844 100
R6840 #
R6812 RD15ES-B1 PROTECT
C6839 4700pF 100V :PP
C6838 10000 100V PP
C6828 0.001 200V :PT
R6838 4.7k :HN
R6833 1M :HN
R6832 220k :RN
D6809 GP06D PULS-RECT
Q6809 2SK2251-01-F19 M PIN OUT
C6840 100 16V
C6844 0.1 B:CHIP
C6839 100 16V
C6843 0.1 B:CHIP
IC6804 BA09T 9V-REG
C6850 0.1 B:CHIP
IC6805 BA12T 12V-REG
C6849 0.1 B:CHIP
R6841 1.8k 1W :RS
D6814 RGP02-20E1_6394 G2 REC1
C6882 0.0047 2k B
CN6610 1P :TAB TO C BOARD CN9007
G2
CN6804 4P TO C BOARD CN9002
IC6607 DM-58 +B CONTROL
Q6613 DTC144ESA OVP
R6642 1SS119-25 STOPPER
R6694 120k :RN
D6635 RD18ES-B OVP
R6693 18k :RN
Q6619 2SC2785-HFE
R6697 #
R6664 2.2k
R6663 10k
R6672 4.7k
R6666 10k
R6620 2SC2785-HFE
R6679 47k
R6684 #
R6688 1k :FPRD
R6653 0.0047
R6657 #
C6608 2SC2500-B SW
R6685 2.2k
R6681 10k
C6660 1
D6638 D1NL20D-TR 15V RECT
R6600 0 :CHIP
C6611 DTC114ESA OVP
R6704 0.47 :FPRD
FB6606 1:1
C6674 330 25V
D6654 D10SB4F AUDIO RECT
L6600 0.45UH
L6609 0.45UH
C6609 2200
C6601 47
L6608 10UH
R6689 4.7
C6667 #
PS6605 5A
FB6605 0.45UH
CN6609 1P
CN6611 1P
PS6606 5A
FB6604 0.45UH
D6633 D10SC4M 6.5V RECT
PS6602 JW(5)
C6654 3300 16V
C6662 47 16V
L6607 3.3UH
PS6601 JW(5)
L6605 10UH
C6661 47 16V
CN6610 1P
CN6612 1P
CN6613 1P
CN6614 1P
D6644 D10SB54F 10.5V RECT
R6710 0.47 5W
R6692 270
C6668 47 25V
D6637 #
R6715 10k :CHIP
C6679 0.47 16V B:CHIP
C6678 #
C6670 680pF 1kV
CN6615 1P
C6650 6800P 1kV
L6604 10UH
C6652 330 160V
C6634 #
R6691 470k 1/2W
R6636 1SS119-25 OCP SW
R6690 10k
C6665 10
R6683 220k 1/2W
Q6610 2SC2785-HFE OCP
R6682 820 2W
R6656 0.1
R6695 #
C6651 1800P 1kV
C6658 4700P 1kV
R6694 0.27 2W
CN6616 1P
CN6618 1P
D6631 D4SBL20J +B RECT
C6631 470 160V
C6632 #
C6633 #
C6635 4.7
C6636 #
C6637 0.1 25V B:CHIP
R6601 :PP
R6602 :PP
R6603 :PP
R6604 :PP
R6605 :PP
R6606 :PP
R6607 :PP
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R6609 :PP
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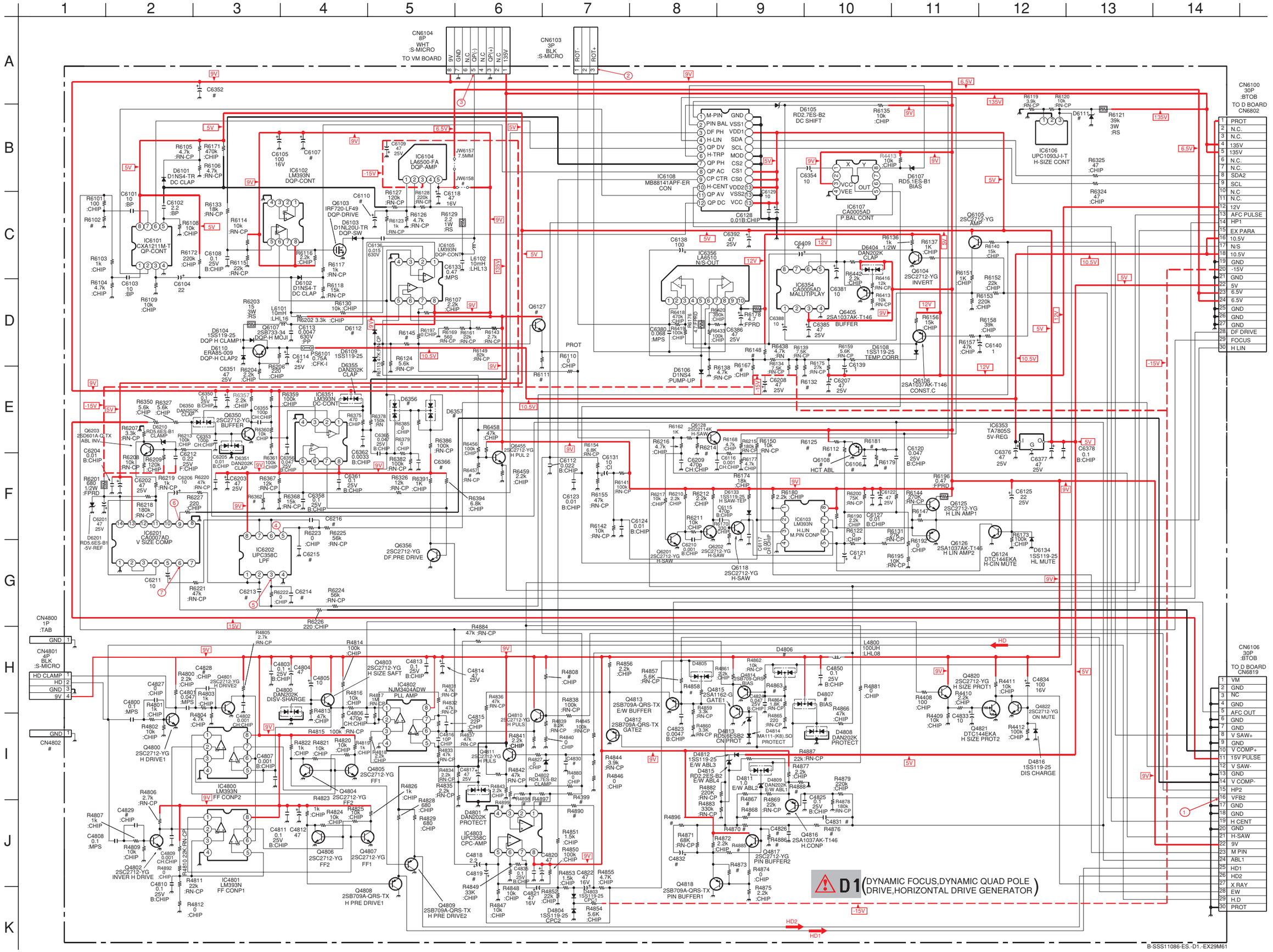
R6617 :PP
R6618 :PP
R6619 :PP
R6620 :PP

(4) Schematic Diagram of D1 Board


CN6104 8P WHT :S-MICRO TO VM BOARD
CN6103 3P BLK :S-MICRO
CN6100 30P :BTOB TO D BOARD CN6802
CN6106 30P :BTOB TO D BOARD CN6819
CN4800 1P :TAB
CN4801 4P BLK :S-MICRO
CN4802
IC6104 LA6500-FA DQP-AMP
IC6102 LM393N DQP-CONT
IC6101 CXA1211M-T QP-CONT
IC6105 LM393N DQP-CONT
IC6356 LA6510 N/S-OUT
IC6354 CA0005AD MALUTIPLAY
IC6107 CA0005AD P.BAL CONT
IC6106 UPC1093J-I-T H-SIZE CONT
IC6353 TA7805S 5V-REG
IC6103 LM393N H.LIN M.PIN CONP
IC6201 CA0007AD V SIZE COMP
IC6202 UPC358C LPF
IC4800 LM393N FF CONP2
IC4801 LM393N FF CONP1
IC4802 NJM3404ADW PLL AMP
IC4803 UPC358C CPC-AMP
D6105 RD2.7ES-B2 DC SHIFT
D6107 RD5.1ES-B1 BIAS
D6108 1SS119-25 TEMP.CORR
D6109 1SS119-25
D6110 ERA85-009 DQP-H CLAP2
D6111
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D6355 DAN202K CLAP
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D6800
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D6802
D6803
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Q6103 IRF720-LF49 DQP-DRIVE
Q6104 2SC2712-YG INVERT
Q6105 2SC2712-YG AMP
Q6106 2SA1037AK-T146 CONST.C
Q6107 2SA1037AK-T146 H.CONP
Q6108 HCT ABL
Q6109 2SC2712-YG H LIN AMP1
Q6110 2SA1037AK-T146 H LIN AMP2
Q6111 DTC144EKA H-CIN MUTE
Q6112 2SC2712-YG H SIZE PROT1
Q6113 2SA1037AK-T146 ON MUTE
Q6114 DTC144EKA H SIZE PROT2
Q6115 2SC2712-YG PIN BUFFER2
Q6116 2SA1037AK-T146 H.CONP
Q6117 2SC2712-YG PIN BUFFER1
Q6118 2SC2712-YG H-SAW
Q6119 2SC2712-YG H-SAW
Q6120 2SC2712-YG H PUL 2
Q6121 2SC2712-YG H PULS
Q6122 2SC2712-YG H PULS
Q6123 2SC2712-YG H PULS
Q6124 2SC2712-YG H PULS
Q6125 2SC2712-YG H PULS
Q6126 2SC2712-YG H PULS
Q6127 #
Q6128 2SC2712-YG H PULS
Q6129 2SC2712-YG H PULS
Q6130 2SC2712-YG H PULS
Q6131 2SC2712-YG H PULS
Q6132 2SC2712-YG H PULS
Q6133 2SC2712-YG H PULS
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Q6135 2SC2712-YG H PULS
Q6136 2SC2712-YG H PULS
Q6137 2SC2712-YG H PULS
Q6138 2SC2712-YG H PULS
Q6139 2SC2712-YG H PULS
Q6140 2SC2712-YG H PULS
Q6141 2SC2712-YG H PULS
Q6142 2SC2712-YG H PULS
Q6143 2SC2712-YG H PULS
Q6144 2SC2712-YG H PULS
Q6145 2SC2712-YG H PULS
Q6146 2SC2712-YG H PULS
Q6147 2SC2712-YG H PULS
Q6148 2SC2712-YG H PULS
Q6149 2SC2712-YG H PULS
Q6150 2SC2712-YG H PULS
Q6151 2SC2712-YG H PULS
Q6152 2SC2712-YG H PULS
Q6153 2SC2712-YG H PULS
Q6154 2SC2712-YG H PULS
Q6155 2SC2712-YG H PULS
Q6156 2SC2712-YG H PULS
Q6157 2SC2712-YG H PULS
Q6158 2SC2712-YG H PULS
Q6159 2SC2712-YG H PULS
Q6160 2SC2712-YG H PULS
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Q6162 2SC2712-YG H PULS
Q6163 2SC2712-YG H PULS
Q6164 2SC2712-YG H PULS
Q6165 2SC2712-YG H PULS
Q6166 2SC2712-YG H PULS
Q6167 2SC2712-YG H PULS
Q6168 2SC2712-YG H PULS
Q6169 2SC2712-YG H PULS
Q6170 2SC2712-YG H PULS
Q6171 2SC2712-YG H PULS
Q6172 2SC2712-YG H PULS
Q6173 2SC2712-YG H PULS
Q6174 2SC2712-YG H PULS
Q6175 2SC2712-YG H PULS
Q6176 2SC2712-YG H PULS
Q6177 2SC2712-YG H PULS
Q6178 2SC2712-YG H PULS
Q6179 2SC2712-YG H PULS
Q6180 2SC2712-YG H PULS
Q6181 2SC2712-YG H PULS
Q6182 2SC2712-YG H PULS
Q6183 2SC2712-YG H PULS
Q6184 2SC2712-YG H PULS
Q6185 2SC2712-YG H PULS
Q6186 2SC2712-YG H PULS
Q6187 2SC2712-YG H PULS
Q6188 2SC2712-YG H PULS
Q6189 2SC2712-YG H PULS
Q6190 2SC2712-YG H PULS
Q6191 2SC2712-YG H PULS
Q6192 2SC2712-YG H PULS
Q6193 2SC2712-YG H PULS
Q6194 2SC2712-YG H PULS
Q6195 2SC2712-YG H PULS
Q6196 2SC2712-YG H PULS
Q6197 2SC2712-YG H PULS
Q6198 2SC2712-YG H PULS
Q6199 2SC2712-YG H PULS
Q6200 2SC2712-YG H PULS
Q6201 2SC2712-YG H-SAW
Q6202 2SC2712-YG H-SAW
Q6203 2SD601A-C-TX ABL INV
Q6204 2SC2712-YG H PULS
Q6205 2SC2712-YG H PULS
Q6206 2SC2712-YG H PULS
Q6207 2SC2712-YG H PULS
Q6208 2SC2712-YG H PULS
Q6209 2SC2712-YG H PULS
Q6210 2SC2712-YG H PULS
Q6211 2SC2712-YG H PULS
Q6212 2SC2712-YG H PULS
Q6213 2SC2712-YG H PULS
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Q6221 2SC2712-YG H PULS
Q6222 2SC2712-YG H PULS
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Q6224 2SC2712-YG H PULS
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Q6238 2SC2712-YG H PULS
Q6239 2SC2712-YG H PULS
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Q6244 2SC2712-YG H PULS
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Q6246 2SC2712-YG H PULS
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Q6252 2SC2712-YG H PULS
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Q6254 2SC2712-YG H PULS
Q6255 2SC2712-YG H PULS
Q6256 2SC2712-YG H PULS
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Q6260 2SC2712-YG H PULS
Q6261 2SC2712-YG H PULS
Q6262 2SC2712-YG H PULS
Q6263 2SC2712-YG H PULS
Q6264 2SC2712-YG H PULS
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Q6266 2SC2712-YG H PULS
Q6267 2SC2712-YG H PULS
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Q6269 2SC2712-YG H PULS
Q6270 2SC2712-YG H PULS
Q6271 2SC2712-YG H PULS
Q6272 2SC2712-YG H PULS
Q6273 2SC2712-YG H PULS
Q6274 2SC2712-YG H PULS
Q6275 2SC2712-YG H PULS
Q6276 2SC2712-YG H PULS
Q6277 2SC2712-YG H PULS
Q6278 2SC2712-YG H PULS
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Q6283 2SC2712-YG H PULS
Q6284 2SC2712-YG H PULS
Q6285 2SC2712-YG H PULS
Q6286 2SC2712-YG H PULS
Q6287 2SC2712-YG H PULS
Q6288 2SC2712-YG H PULS
Q6289 2SC2712-YG H PULS
Q6290 2SC2712-YG H PULS
Q6291 2SC2712-YG H PULS
Q6292 2SC2712-YG H PULS
Q6293 2SC2712-YG H PULS
Q6294 2SC2712-YG H PULS
Q6295 2SC2712-YG H PULS
Q6296 2SC2712-YG H PULS
Q6297 2SC2712-YG H PULS
Q6298 2SC2712-YG H PULS
Q6299 2SC2712-YG H PULS
Q6300 2SC2712-YG H PULS
Q6301 2SC2712-YG H PULS
Q6302 2SC2712-YG H PULS
Q6303 2SC2712-YG H PULS
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Q6309 2SC2712-YG H PULS
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Q6311 2SC2712-YG H PULS
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Q6313 2SC2712-YG H PULS
Q6314 2SC2712-YG H PULS
Q6315 2SC2712-YG H PULS
Q6316 2SC2712-YG H PULS
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Q6318 2SC2712-YG H PULS
Q6319 2SC2712-YG H PULS
Q6320 2SC2712-YG H PULS
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Q6324 2SC2712-YG H PULS
Q6325 2SC2712-YG H PULS
Q6326 2SC2712-YG H PULS
Q6327 2SC2712-YG H PULS
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Q6329 2SC2712-YG H PULS
Q6330 2SC2712-YG H PULS
Q6331 2SC2712-YG H PULS
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Q6334 2SC2712-YG H PULS
Q6335 2SC2712-YG H PULS
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Q6342 2SC2712-YG H PULS
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Q6344 2SC2712-YG H PULS
Q6345 2SC2712-YG H PULS
Q6346 2SC2712-YG H PULS
Q6347 2SC2712-YG H PULS
Q6348 2SC2712-YG H PULS
Q6349 2SC2712-YG H PULS
Q6350 2SC2712-YG BUFFER
Q6351 2SC2712-YG H PULS
Q6352 2SC2712-YG H PULS
Q6353 2SC2712-YG H PULS
Q6354 2SC2712-YG H PULS
Q6355 2SC2712-YG H PULS
Q6356 2SC2712-YG DF.PRE DRIVE
Q6357 2SC2712-YG H PULS
Q6358 2SC2712-YG H PULS
Q6359 2SC2712-YG H PULS
Q6360 2SC2712-YG H PULS
Q6361 2SC2712-YG H PULS
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Q6363 2SC2712-YG H PULS
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Q6372 2SC2712-YG H PULS
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Q6382 2SC2712-YG H PULS
Q6383 2SC2712-YG H PULS
Q6384 2SC2712-YG H PULS
Q6385 2SC2712-YG H PULS
Q6386 2SC2712-YG H PULS
Q6387 2SC2712-YG H PULS
Q6388 2SC2712-YG H PULS
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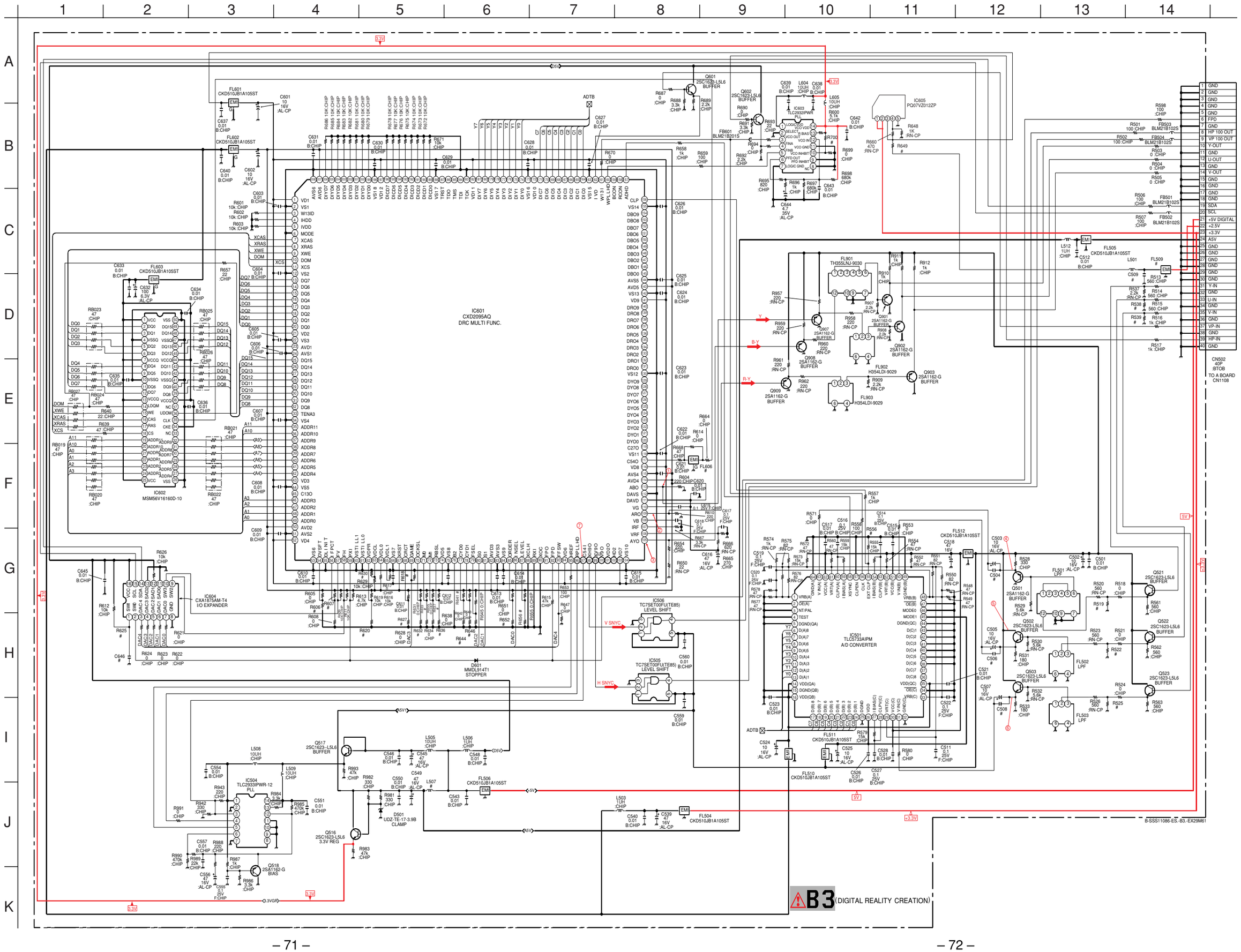
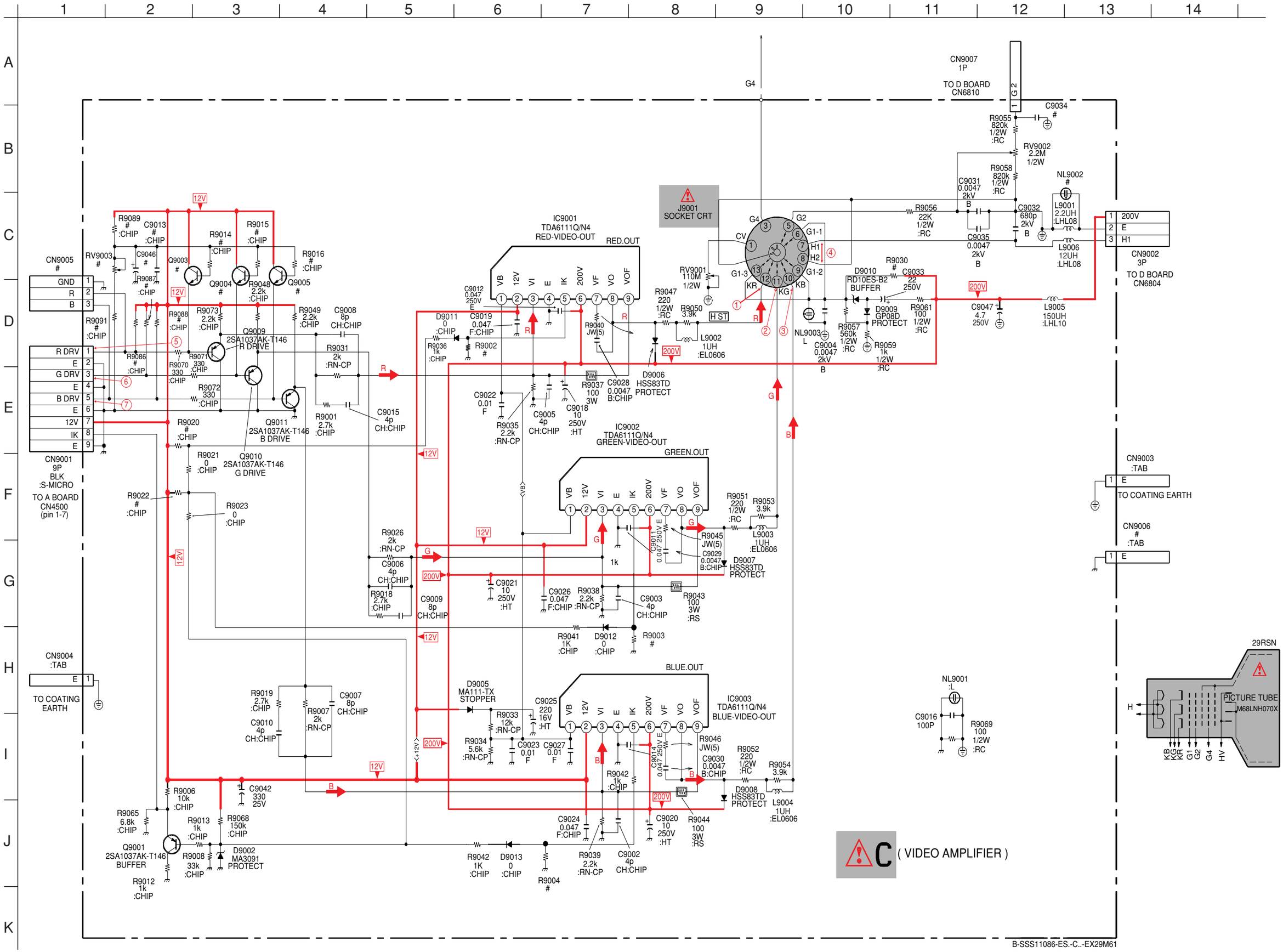
Q6390 2SC2712-YG H PULS
Q6391 2SC2712-YG H PULS
Q6392 2SC2712-YG H PULS
Q6393 2SC2712-YG H PULS
Q6394 2SC2712-YG H PULS
Q6395 2SC2712-YG H PULS
Q6396 2SC2712-YG H PULS
Q6397 2SC2712-YG H PULS
Q6398 2SC2712-YG H PULS
Q6399 2SC2712-YG H PULS
Q6400 2SC2712-YG H PULS
Q6401 2SC2712-YG H PULS
Q6402 2SC2712-YG H PULS
Q6403 2SC2712-YG H PULS
Q6404 2SC2712-YG H PULS
Q6405 2SA1037AK-T146 BUFFER
Q6406 2SC2712-YG H PULS
Q6407 2SC2712-YG H PULS
Q6408 2SC2712-YG H PULS
Q6409 2SC2712-YG H PULS
Q6410 2SC2712-YG H PULS
Q6411 2SC2712-YG H PULS
Q6412 2SB709A-QRS-TX GATE2
Q6413 2SC2712-YG H PULS
Q6414 2SC2712-YG H PULS
Q6415 2SA1162-G GATE1
Q6416 2SC2712-YG H PULS
Q6417 2SC2712-YG H PULS
Q6418 2SC2712-YG H PULS
Q6419 2SC2712-YG H PULS
Q6420 2SC2712-YG H PULS
Q6421 2SC2712-YG H PULS
Q6422 2SC2712-YG H PULS
Q6423 2SC2712-YG H PULS
Q6424 2SC2712-YG H PULS
Q6425 2SC2712-YG H PULS

(5) Schematic Diagram of B3 Board



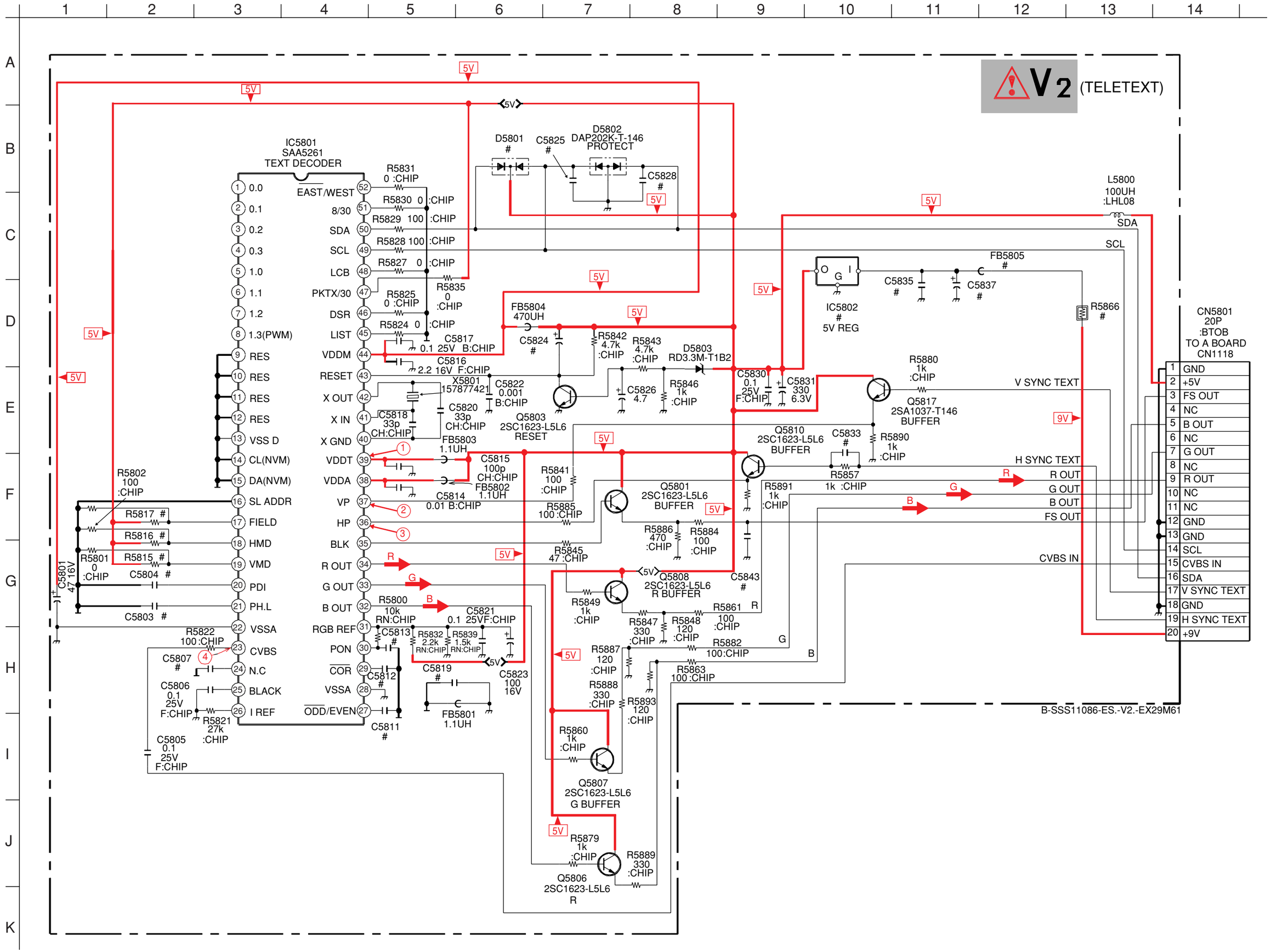
(6) Schematic Dia gram of C Board



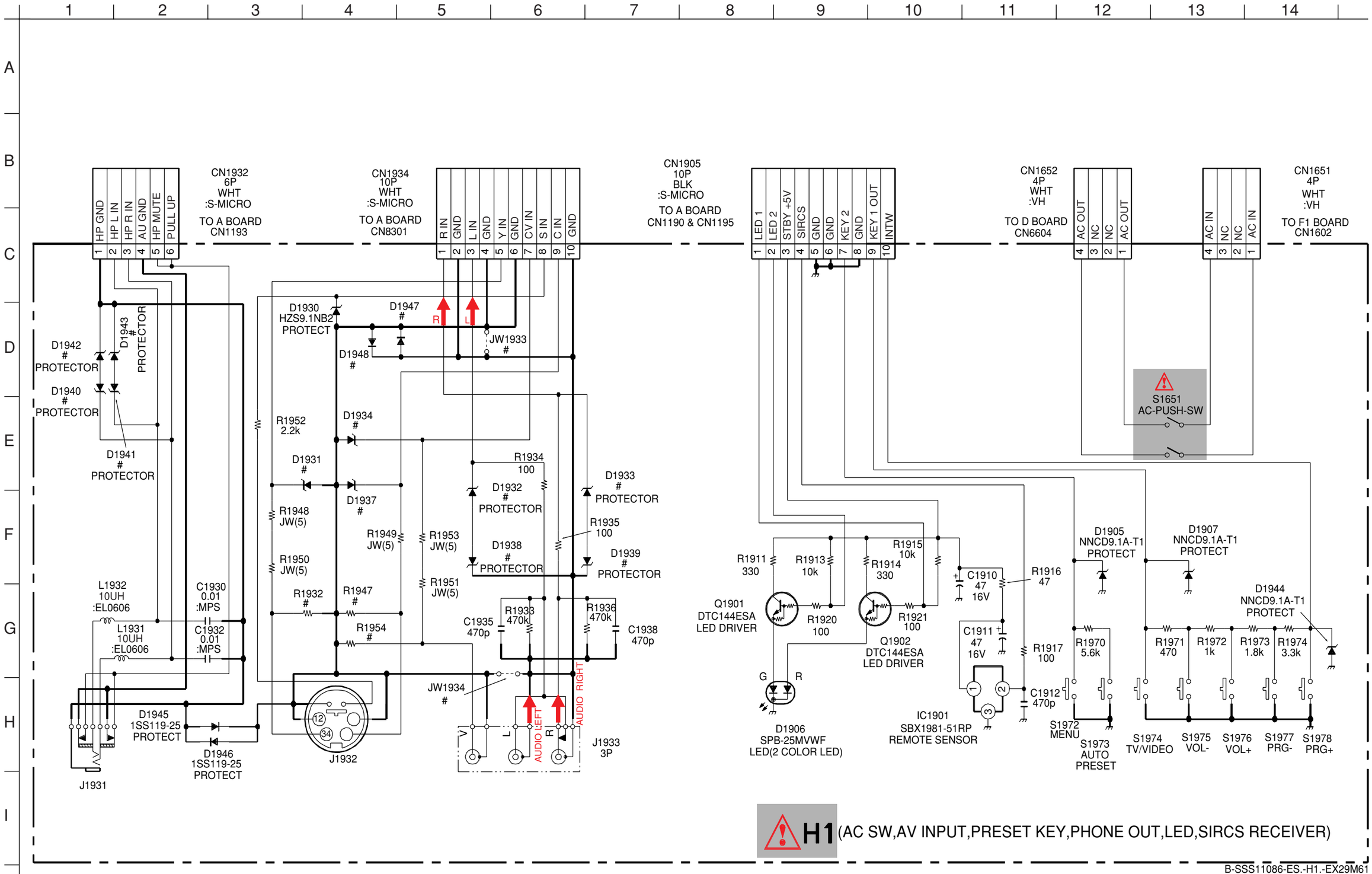
C (VIDEO AMPLIFIER)

B-SSS11086-ES.-C.-EX29M61

(7) Schematic Dia gram of V2 Board



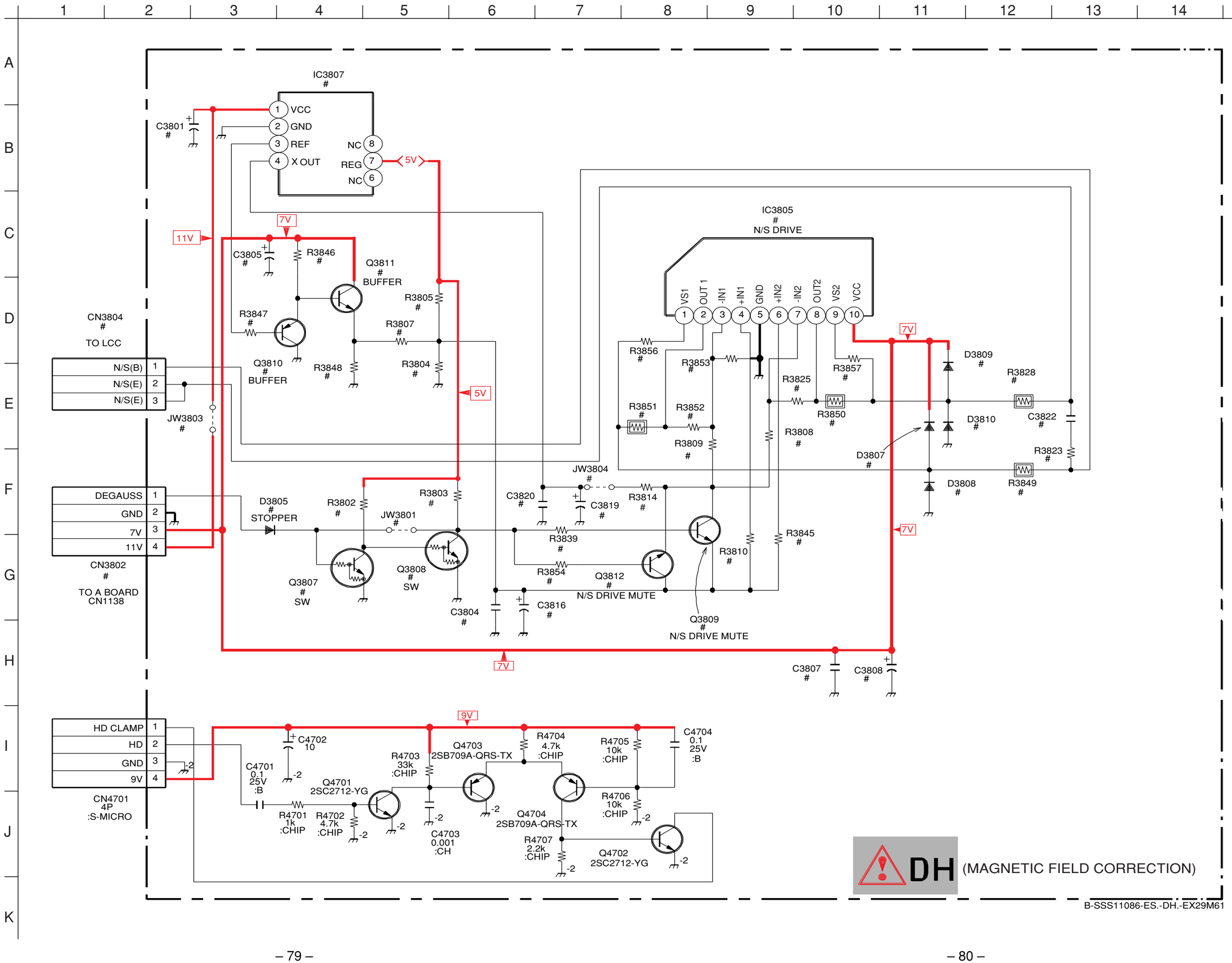
(8) Schematic Dia gram of H1 Board



H1 (AC SW,AV INPUT,PRESET KEY,PHONE OUT,LED,SIRCS RECEIVER)

B-SSS11086-ES.-H1.-EX29M61

(9) Schematic Dia gram of DH Board



8-3. VOLTAGE MEASUREMENTS

A(1/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC001	1	4.8
	2	0
	3	0
	4	0.8
	5	0.8
	6	0
	7	0.4
	8	0
	9	4.9
	10	0
	11	2.2
	12	[(✻)] <2.2>
	13	4.9
	14	4.9
	15	[(0.6)]<1.6>
	16	[(0.5)]<1.6>
	17	2.4
	18	1.0
	19	4.9
	20	0
	21	0
	22	4.9
	23	0
	24	[(0.5)]<1.6>
	25	0
	26	0
	27	4.9
	28	0
	29	4.8
	30	4.9
	31	4.9
	32	0
	33	0
	34	0
	35	4.9
	36	0
	37	0
	38	2.5
	39	2.5
	40	4.7
	41	4.9
	42	0
	43	[(0.5)]<1.6>
	44	0.6
	45	0
	46	0
	47	4.9
	48	4.7
	49	4.9
	50	4.6
	51	0
	52	2.6
	53	0
	54	[(4.5)]<0>
	55	0.1
	56	0
	57	0
	58	0
	59	0
	60	0
	61	0
	62	4.4
	63	0.4
	64	4.8
IC002	1	0
	2	4.9
	3	4.9
	4	7.0
	5	4.9
	6	0
	7	0.9
IC003	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	4.9
	7	0
	8	4.9
IC004	1	0
	2	0
	3	<[4.9]>(0)
	4	0
	5	0
	6	4.9
	7	0
	8	[0]<(4.9)>
IC100	1	4.9
	2	4.9
	3	0
IC1200	1	4.5
	2	4.5
	3	4.5
	4	0
	5	<(4.5)>[4.9]
	6	4.5
	7	<(4.5)>[0]
	8	<(9.0)>[0]
IC1201	1	0
	2	<[0]>(0.9)
	3	<(1.2)>[0]
	4	4.5
	5	4.5
	6	4.5
	7	4.5
	8	4.5
	9	4.5
	10	4.5
	11	4.5
	12	4.5
	13	<(0.6)>[0]
	14	2.5
	15	<(9.0)>[0.2]
	16	4.6
	17	4.6
	18	2.8
	19	<(0.6)>[0]
	20	4.5
	21	4.5
	22	4.5
	23	4.5
	24	4.5
	25	4.5
	26	4.5
	27	4.5
	28	4.5
	29	0<[(4.5)]>
	30	<(3.2)>[0]
	31	<(4.5)>[3.3]
	32	4.4
IC1203	1	4.5
	2	[0]<(4.5)>
	3	<[4.5]>(0)
	4	0
	5	4.5
	6	4.5
	7	4.5
	8	9.0
IC1204	1	0
	2	0
	3	27.5
	4	0
	5	0
	6	<(0.6)>[3.5]
	7	13.6
	8	1.4[3.5]<(0.9)>
	9	0
	10	28.3
	11	13.2
	12	13.4
IC1205	1	4.5
	2	4.5
	3	4.5
	4	4.5
	5	4.9
	6	0.4
	7	0
	8	0.2
	9	0.2
	10	0.2
	11	0.2
	12	<(0.2)>[0]
	13	4.9
	14	9.0
IC1206	1	✻
	2	✻
	3	✻
	4	✻
	5	✻
	6	✻
	7	✻
	8	✻
	9	4.5
	10	4.5
	11	4.5
	12	4.5
	13	4.5
	14	4.5
	15	4.5
	16	4.5
IC1207	1	0
	2	0
	3	0
	4	0.1
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0
	13	0
	14	0
	15	0
IC2200	1	4.5
	2	4.5
	3	4.3
	4	0
	5	<(4.2)>[0]
	6	[(0)]<4.5>
	7	4.6
	8	9.1

A(2/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC2300	1	0.9
	2	2
	3	1.3
	4	0
	5	4.9
	6	4.9
	7	1.5
	8	0
	9	0.6
	10	[(3.6)]<0>
	11	[(0)]<4.9>
	12	1.4
	13	0
	14	1.5
	15	0
	16	1.5
IC2600	I	13.0
	G	9.1
	O	0
IC2601	I	7.5
	G	0
	O	5.0
IC2603	I	7.3
	G	0
	O	3.3
IC2604	1	1.2
	2	2.6
	3	4.8
IC4301	1	4.0
	2	0
	3	4.4
	4	4.7
	5	3.5
	6	<[3.4]>(0)
	7	7.6
	8	0
	9	0
	10	0.4
	11	1.8
	12	[0]<(9.1)>
	13	1.0
	14	5.1
	15	2.6
	16	0
	17	3.5
	18	2.7
	19	4.2
	20	0
	21	[0]<(6.3)>
	22	1.7
	23	[6.5]<(0)>
	24	0
	25	0
	26	2.4
	27	3.3
	28	2.6
	29	2.6
	30	2.4
	31	3.3
	32	9.1
	33	0
	34	4.8
	35	4.8
	36	4.8
	37	9.1
	38	0
	39	[0]<(4.3)>
	40	4.3
	41	4.3
	42	0
	43	0
	44	0
	45	[0]<(6.6)>
	46	[0]<(9.1)>
	47	9.1
	48	6.0
	49	2.6
	50	4.1
	51	0
	52	0
	53	6.0
	54	6.0
	55	0
	56	6.0
	57	6.0
	58	6.0
	59	0.4
	60	0
	61	4.6
	62	[0]<(4.6)>
	63	4.4
	64	3.6
IC8302	1	4.4
	2	4.5
	3	4.0
	4	[0]<(4.5)>
	5	4.4
	6	0.1
	7	5.0
	8	4.0
	9	4.5
	10	[0]<(4.2)>
	11	0.3
	12	4.4
	13	0.1
	14	5.0
	15	4.0
	16	4.5
	17	4.2
	18	4.5
	19	4.4
	20	0.1
	21	[0]<(5.0)>
	22	4.0
	23	4.5
	24	4.0
	25	4.5
	26	4.4
	27	0.1
	28	5.0
	29	4.5
	30	[0]<(4.5)>
	31	4.5
	32	0
	33	4.6
	34	4.6
	35	0
	36	0
	37	4.4
	38	4.5
	39	3.8
	40	4.5
	41	4.5
	42	9.0
	43	4.5
	44	4.3
	45	4.5
	46	3.8
	47	[0]<(4.4)>
	48	0
	49	4.2
	50	4.5
	51	4.4
	52	4.5
	53	4.5
	54	4.5
	55	[0]<(3.8)>
	56	3.2
	57	0
	58	[0]<(4.3)>
	59	4.5
	60	4.2
	61	4.5
	62	4.5
	63	4.3
	64	4.5
IC8305	I	13.1
	G	0
	O	9.1
IC8306	1	<[0]>(2.2)
	2	[0.1]<(1.9)>
	3	[0]<(1.6)>
	4	0.1
	5	2.6
	6	4.9
	7	2.6
	8	0
	9	0.3
	10	0.9
	11	2.5
	12	4.9
	13	4.6
	14	4.6
	15	0
	16	0
	17	2.5
	18	2.5
	19	1.4
	20	2.3
	21	1.8
	22	1.8
	23	[0]<(1.8)>
	24	0.1
	25	[0]<(1.9)>
	26	[0]<(1.9)>
	27	[0]<(1.9)>
	28	0
	29	<[0]>(2.0)
	30	[0](2.0)<1.6>
	31	<[0]>(1.2)
	32	[0.1]<(4.9)>
	33	[0.1]<(2.5)>
	34	[0]<(2.5)>
	35	[0]<(2.50)>
	36	0
	37	[0]<(1.1)>
	38	3.9
	39	1.8
	40	3.3
	41	[0]<(2.3)>
	42	0
	43	0
	44	[0]<(2.3)>
	45	3.6
	46	2.3
	47	[0]<(3.6)>
	48	1.7

A(3/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC8309	1	3.0
	2	5.3
	3	2.8
	4	0
	5	0
	6	9.0
	7	2.0
	8	0
IC8310	1	0.8
	2	0
	3	0
	4	0
	5	0
	6	2.0
	7	0
	8	5.0
	9	5.8
	10	0
	11	4.6
	12	0
	13	0
	14	4.6
	15	5.1
	16	2.5
	17	2.5
	18	0
	19	2.9
	20	8.2
	21	2.5
	22	0.2
	23	0
	24	0
IC8312	1	4.9
	2	0.3
	3	0
	4	0
	5	4.9
Q001	B	4.9
	C	0
	E	0.6
Q002	B	0
	C	4.9
	E	0
Q003	B	0.4
	C	4.9
	E	0.3
Q004	B	0.1
	C	0
	E	0
Q005	B	1.6
	C	0
	E	2.2
Q006	B	1.8
	C	0
	E	2.4
Q007	B	1.8
	C	0
	E	2.4
Q101	B	<(2.8)>[0]
	C	0
	E	3.4
Q301	B	[0]<(12.9)>
	C	0
	E	12.3
Q313	B	*
	C	*
	E	*
Q1203	B	0
	C	5.0
	E	(0.2)<[0]>
Q1204	D	0
	G	0
	S	0
Q1205	B	[(0)]<5.5>
	C	[(0)]<9.0>
	E	[0]<(4.9)>
Q1206	B	2.9
	C	<5.5>[(0)]
	E	<(2.3)>[0]
Q1207	B	28.0
	C	0
	E	18.1
Q1208	B	0
	C	13.2
	E	0
Q1209	B	0
	C	13.2
	E	0
Q1210	B	0
	C	<(13.4)>[0]
	E	0
Q1211	B	9.0
	C	0
	E	9.0
Q1215	B	0
	C	[0]<(9.0)>
	E	0
Q2200	B	0
	C	0
	E	0
Q2201	B	0
	C	0
	E	0
Q2304	B	[(3.6)]<0>
	C	[(0)]<4.9>
	E	0
Q2305	B	[(2.3)]<3.1>
	C	4.9
	E	[(1.5)]<2.3>
Q2306	B	0.8
	C	0
	E	1.5
Q3300	B	<(4.6)>[0]
	C	0
	E	4.6
Q4300	B	6.2
	C	9.1
	E	<(5.5)>[0]
Q4301	B	-11.9
	C	1.7
	E	-11.7
Q4302	B	0
	C	11.7
	E	<(0.6)>[0]
Q4303	B	<(0.3)>[0]
	C	<(1.6)>[3.2]
	E	0
Q4304	B	7.1
	C	9.1
	E	6.5
Q4307	B	<(2.8)>[0]
	C	<(0)>[4.5]
	E	0
Q4308	B	2.5
	C	0
	E	3.2
Q4310	B	2.4
	C	0
	E	[0]<(3.1)>
Q4311	B	5.5
	C	0
	E	6.2
Q4312	B	8.0
	C	1.4
	E	8.6
Q4313	B	*
	C	*
	E	*
Q4314	B	0.9
	C	0
	E	1.6
Q4315	B	[(3.2)]<3.5>
	C	0
	E	0
Q4316	B	<(3.0)>[2.5]
	C	<(4.5)>[0]
	E	3.2
Q4317	B	<(0)>[3.1]
	C	4.5
	E	<(0)>[3.2]
Q4319	B	6.5
	C	1.9
	E	7.1
Q4320	B	1.6
	C	0
	E	2.2
Q4321	B	1.8
	C	0
	E	2.4
Q4322	B	1.8
	C	0
	E	2.4
Q4823	B	1.1
	C	0
	E	1.7
Q4824	B	*
	C	*
	E	*
Q4825	B	[(0)]<-1.0>
	C	[9.1]<(0)>
	E	[0.8]<(0)>
Q4826	B	*
	C	*
	E	*
Q8301	B	4.5
	C	0
	E	5.2
Q8302	B	4.4
	C	9.0
	E	3.8
Q8303	B	4.4
	C	9.0
	E	3.7
Q8304	B	4.4
	C	9.0
	E	3.8
Q8306	B	4.2
	C	9.0
	E	3.6

A(4/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q8308	B	3.8	Q8330	B	5.6	Q8352	B	8.4
	C	9.0		C	9.0		C	3.7
	E	3.1		E	5.0		E	9.0
Q8309	B	4.4	Q8331	B	2.4	Q8358	B	0
	C	9.0		C	6.4		C	0
	E	3.8		E	1.8		E	0
Q8310	B	0.1	Q8332	B	6.4	Q8359	B	0
	C	4.9		C	9.0		C	0
	E	<(0.1)>[0]		E	5.8		E	0
Q8319	B	[0]<(1.8)>	Q8333	B	2.5	Q8360	B	0
	C	0		C	[(7.1)]<6.7>		C	0
	E	2.4		E	1.9		E	0
Q8320	B	1.8	Q8334	B	4.4	Q8361	B	3.0
	C	0		C	9.0		C	4.9
	E	2.4		E	3.8		E	2.4
Q8321	B	1.7	Q8335	B	2.5	Q8362	B	3.0
	C	0		C	<7.1>[(6.7)]		C	4.9
	E	2.3		E	1.9		E	2.4
Q8326	B	0.2	Q8336	B	4.4	Q8363	B	3.0
	C	3.4		C	9.0		C	5.0
	E	0		E	3.8		E	2.4
Q8327	B	3.5	Q8337	B	0	Q8364	B	1.6
	C	0.2		C	9.0		C	0
	E	0		E	0		E	2.2
Q8328	B	0.2	Q8344	B	0			
	C	5.3		C	0			
	E	0		E	0.7			
Q8329	B	2.4	Q8351	B	2.9			
	C	5.6		C	8.4			
	E	1.8		E	2.3			

V2 BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC5801	1	0		27	2.4	IC5802	I	7.9
	2	0		28	-0		G	0
	3	0		29	0.9		O	4.9
	4	0		30	0	Q5801	B	4.8
	5	0		31	1.8		C	4.9
	6	0		32	0.2		E	4.2
	7	0		33	0.5	Q5803	B	0.7
	8	0		34	0.2		C	0.02
	9	0		35	4.8		E	0
	10	0		36	0.3	Q5806	B	0.03
	11	0		37	0.1		C	4.9
	12	0		38	4.9		E	0
	13	0		39	4.9	Q5807	B	0.04
	14	0		40	0		C	4.9
	15	0		41	2.3		E	0
	16	00		42	2.5	Q5808	B	0.04
	17	0		43	0		C	4.9
	18	0		44	4.8		E	0
	19	0		45	0	Q5810	B	0.3
	20	0.9		46	0		C	4.9
	21	0.9		47	4.9		E	0.3
	22	0		48	0	Q5817	B	4.9
	23	2.2		49	4.5		C	0.1
	24	0.9		50	4.5		E	0.09
	25	2.0		51	0			
	26	2.4		52	0			

D1(1/2) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC4800	1	0.3
	2	4.4
	3	4.5
	4	0
	5	4.5
	6	3.4
	7	0.4
	8	9.0
IC4801	1	0.3
	2	4.4
	3	4.5
	4	0
	5	4.5
	6	3.1
	7	0.4
	8	9.0
IC4802	1	4.5
	2	4.5
	3	4.5
	4	0
	5	0.8
	6	0.7
	7	3.5
	8	9.0
IC6101	1	2.6
	2	2.0
	3	2.1
	4	0
	5	2.1
	6	2.4
	7	2.6
	8	5.0
IC6102	1	0
	2	1.7
	3	1.8
	4	0
	5	5.0
	6	4.5
	7	4.5
	8	9.0
IC6103	1	2.9
	2	1.6
	3	1.4
	4	0
	5	1.1
	6	4.0
	7	1.2
	8	9.0
IC6104	1	2.0
	2	2.4
	3	-15.4
	4	1.4
	5	6.7
IC6105	1	5.5
	2	1.1
	3	2.0
	4	0.3
	5	1.7
	6	0.9
	7	2.0
	8	0.3
IC6106	1	2.5
	2	0
	3	8.9
IC6107	1	4.6
	2	0
	3	9.0
	4	0
	5	4.5
	6	4.5
	7	0
	8	6.5
IC6108	1	2.5
	2	2.6
	3	2.4
	4	0.8
	5	2.4
	6	1.4
	7	1.9
	8	2.8
	9	1.2
	10	3.1
	11	2.0
	12	2.5
	13	0
	14	0
	15	0
	16	0
	17	0
	18	0
	19	0
	20	4.6
	21	4.6
	22	5.0
	23	0
	24	0
IC6201	1	0
	2	0
	3	0
	4	-21.7
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	2.17
	12	0
	13	5.0
	14	5.0
IC6202	1	3.5
	2	3.5
	3	3.4
	4	0
	5	3.4
	6	3.4
	7	3.4
	8	9.0
IC6351	1	5.2
	2	4.4
	3	4.8
	4	0
	5	4.1
	6	4.5
	7	0.4
	8	9.0
IC6353	I	11.0
	G	0
	O	0
IC6354	1	4.6
	2	0
	3	9.0
	4	0
	5	4.5
	6	4.5
	7	0
	8	3.4
IC6356	1	-2.8
	2	-6.3
	3	-3.0
	4	-3.3
	5	-15.0
	6	-3.5
	7	-3.0
	8	-4.0
	9	-4.1
	10	11.7
Q4800	B	1.2
	C	3.3
	E	0
Q4801	B	0.6
	C	5.6
	E	0
Q4802	B	1.3
	C	4.4
	E	0
Q4803	B	0
	C	8.9
	E	5.1
Q4804	B	0.4
	C	3.8
	E	0
Q4805	B	0.3
	C	4.8
	E	0
Q4806	B	0.4
	C	3.9
	E	0
Q4807	B	0
	C	4.8
	E	0
Q4808	B	0
	C	4.2
	E	3.2
Q4809	B	0.5
	C	0.8
	E	0
Q4810	B	0.1
	C	8.9
	E	0.4
Q4811	B	0
	C	8.9
	E	0.2
Q4812	B	1.4
	C	0
	E	0.8
Q4813	B	2.6
	C	0
	E	0.8
Q4814	B	1.8
	C	0
	E	0.7
Q4815	B	1.4
	C	0
	E	0.7
Q4816	B	1.8
	C	0
	E	2.4
Q4817	B	3.9
	C	8.9
	E	3.3
Q4818	B	3.3
	C	0
	E	3.9
Q4820	B	4.5
	C	0
	E	5.2

D1(2/2) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q4821	B	4.3	Q6108	B	1.7	Q6202	B	-0.6
	C	0		C	0		C	2.6
	E	0		E	2.4		E	0
Q4822	B	0	Q6118	B	0	Q6203	B	-6.0
	C	0		C	4.1		C	-2.3
	E	0		E	0		E	-6.6
Q6103	D	30.2	Q6124	B	0	Q6350	B	0.4
	G	4.4		C	1.5		C	2.1
	S	0		E	0		E	0
Q6104	B	0.6	Q6125	B	1.5	Q6356	B	0.4
	C	2.9		C	8.9		C	1.7
	E	0		E	1.6		E	0
Q6105	B	3.4	Q6126	B	1.5	Q6405	B	-0.6
	C	5.0		C	0		C	-4.5
	E	2.9		E	1.6		E	0
Q6106	B	2.5	Q6128	B	1.1	Q6455	B	2.6
	C	-3.3		C	8.9		C	8.9
	E	3.1		E	2.8		E	1.9
Q6107	B	10.8	Q6201	B	0.4			
	C	4.8		C	4.8			
	E	11.1		E	0			

DH BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC3805	1	4.2	Q3807	B	0
	2	3.8		C	4.8
	3	2.6		E	0
	4	2.6	Q3808	B	4.8
	5	0		C	0.1
	6	2.6		E	0
	7	2.6	Q3809	B	0.1
	8	2.6		C	1.5
	9	2.4		E	2.6
	10	6.6	Q3810	B	2.5
IC3807	1	10.8		C	0
	2	0		E	3.2
	3	2.5	Q3811	B	3.2
	4	1.7		C	6.6
	5	0		E	2.5
	6	0	Q3812	B	0.1
	7	4.9		C	2.6
	8	0		E	1.5

H1 BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC901	1	4.9
	2	4.8
	3	0
Q1901	B	0.1
	C	4.9
	E	0.1
Q1902	B	4.5
	C	2.6
	E	1.8

B3(1/3) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC501	1	0
	2	0
	3	0
	4	0
	5	0
	6	0.6
	7	0.2
	8	1.2
	9	0
	10	1.5
	11	0
	12	1.3
	13	0
	14	3.3
	15	-0
	16	3.3
	17	1.2
	18	1.6
	19	1.8
	20	1.6
	21	2.0
	22	1.9
	23	1.7
	24	1.8
	25	-0
	26	4.8
	27	2.4
	28	0
	29	3.4
	30	4.8
	31	2.4
	32	0
	33	1.4
	34	0
	35	0
	36	1.4
	37	1.4
	38	0
	39	0
	40	0
	41	0
	42	0
	43	0
	44	0
	45	4.8
	46	0
	47	0
	48	0
	49	0
	50	2.4
	51	4.8
	52	3.4
	53	2.4
	54	0
	55	0
	56	1.4
	57	0
	58	0
	59	0
	60	1.5
	61	3.4
	62	0
	63	0
	64	0
IC504	1	0
	2	0
	3	0
	4	3.3
	5	1.6
	6	2.0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	2.1
	13	2.2
	14	0
IC505	1	0
	2	3.2
	3	4.8
	4	4.8
	5	0
IC506	1	0
	2	3.0
	3	0
	4	0
	5	0
IC602	1	3.3
	2	1.5
	3	1.4
	4	0
	5	1.1
	6	1.6
	7	3.3
	8	1.5
	9	1.4
	10	0
	11	1.4
	12	0.9
	13	3.3
	14	0.5
	15	3.2
	16	0
	17	3.1
	18	3.1
	19	0
	20	0
	21	0
	22	0
	23	0
	24	0
	25	3.3
	26	0
	27	0
	28	0
	29	0
	30	0
	31	0
	32	0
	33	0
	34	3.3
	35	1.5
	36	0.5
	37	0
	38	3.3
	39	1.6
	40	1.4
	41	0
	42	1.4
	43	1.7
	44	3.3
	45	1.6
	46	1.5
	47	0
	48	1.3
	49	0.8
	50	0
IC603	1	0
	2	0
	3	1.2
	4	0.2
	5	1.3
	6	1.3
	7	0
	8	0
	9	0
	10	0
	11	0
	12	1.3
	13	0
	14	3.3
IC604	1	4.9
	2	0
	3	0
	4	0.3
	5	0.3
	6	0.4
	7	0.3
	8	0
	9	3.2
	10	3.2
	11	0
	12	4.9
	13	0
	14	4.6
	15	4.6
	16	4.9

B3(2/3) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC601	1	2.3		74	2.4		137	1.8
	2	0		66	0		138	0
	3	0		67	3.3		139	1.7
	4	0		68	0		140	1.3
	5	0		69	0.3		141	2.4
	6	0		70	0		142	0
	7	0		71	0		143	3.3
	8	0		72	3.3		144	0
	9	0		73	0		145	1.1
	10	0.4		74	2.4		146	0.9
	11	0		75	0		147	1.4
	12	0		76	0		148	1.4
	13	0		77	0		149	1.5
	14	0		78	3.3		150	1.8
	15	0		79	3.3		151	1.4
	16	0		80	0.3		152	1.7
	17	0		81	0.4		153	1.6
	18	0		82	3.2		154	1.7
	19	0		83	0		155	0
	20	1.5		84	0		156	0.1
	21	0		85	3.3		157	3.2
	22	0		86	0.3		158	0.9
	23	3.3		87	3.3		159	0.9
	24	0		88	0		160	1.3
	25	0		89	0		161	1.3
	26	0		90	0		162	0
	27	1.6		91	1.6		163	0
	28	0		92	1.6		164	1.5
	29	0		93	0		165	1.5
	30	0		94	2.4		166	1.7
	31	0		95	1.6		167	1.9
	32	1.6		96	0		168	1.4
	33	3.2		97	2.0		169	1.6
	34	-0		98	3.0		170	1.5
	35	0		99	0		171	1.5
	36	0		100	0		172	2.4
	37	0		101	0		173	0
	38	0		102	0.2		174	1.7
	39	0		103	2.4		175	1.4
	40	0		104	0		176	1.0
	41	0		105	0.3		177	1.5
	42	0		106	1.0		178	1.8
	43	2.3		107	1.2		179	0
	44	0		108	1.0		180	1.2
	45	1.2		109	0.5		181	0.6
	46	0		110	2.2		182	0
	47	0		111	3.3		183	0
	48	0		112	0		184	2.6
	49	0		113	0.5		185	2.6
	50	0		114	3.3		186	2.6
	51	0		115	3.3		187	2.6
	52	0		116	2.4		188	0
	53	0		117	1.5		189	0.3
	54	3.3		118	0		190	0
	55	0		119	0		191	0.3
	56	0		120	1.1		192	0
	57	2.9		121	1.1		193	0.3
	58	2.9		122	1.3		194	0
	59	0		123	1.3		195	0.3
	60	0		124	1.5		196	0.3
	61	0		125	1.5		197	2.3
	62	0		126	2.0		198	0
	63	2.9		127	1.3		199	0.3
	64	2.9		128	1.1		200	0.3
	65	0		129	0.1		201	0.3
	66	0		130	0.1		202	0.3
	67	3.3		131	1.0		203	0.3
	68	0		132	0.9		204	0.3
	69	0.3		133	1.8		205	0
	70	0		134	1.8		206	0.3
	71	0		135	2.3		207	3.3
	72	3.3		136	2.2		208	0
	73	0						

B3(3/3) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q501	B	0	Q521	B	4.8	Q902	B	0
	C	2.9		C	2.4		C	0.8
	E	2.2		E	3.1		E	0.2
Q502	B	4.8	Q522	B	4.8	Q903	B	0.7
	C	2.1		C	3.1		C	0.8
	E	2.8		E	3.7		E	0.2
Q503	B	4.8	Q523	B	4.8	Q907	B	0
	C	2.1		C	3.0		C	1.2
	E	2.7		E	0		E	0.5
Q516	B	4.0	Q601	B	4.0	Q908	B	0
	C	2.5		C	0.7		C	1.0
	E	3.2		E	0		E	0.3
Q517	B	4.1	Q602	B	4.2	Q909	B	0
	C	3.4		C	0.4		C	1.2
	E	0		E	0.5		E	0
Q518	B	0.7	Q901	B	0.8			
	C	1.3		C	0.7			
	E	0		E	0			

C BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC9001	1	3.4		7	<(140)>[134]		9	159
	2	11.7		8	<(159)>[137]		10	156
	3	3.3		9	<[139]>(133)	Q9001	B	8.3
	4	-0	IC9003	1	3.4		C	0
	5	(8.3)<[8.8]>		2	11.8		E	4.5
	6	199		3	3.4	Q9009	B	3.0
	7	<[149]>(144)		4	<[-0]>(0.12)		C	0
	8	<(159)>[154]		5	8.5		E	3.6
	9	(144)<[147]>		6	198	Q9010	B	3.2
IC9002	1	3.4		7	<[146]>(141)		C	0
	2	11.7		8	160		E	3.8
	3	3.3		9	143.9	Q9011	B	2.9
	4	-0	J9001	3	520		C	0
	5	8.6		5	<(22.2)>[-0]		E	3.6
	6	199		8	160			

VM BOARD VOLTAGE LIST

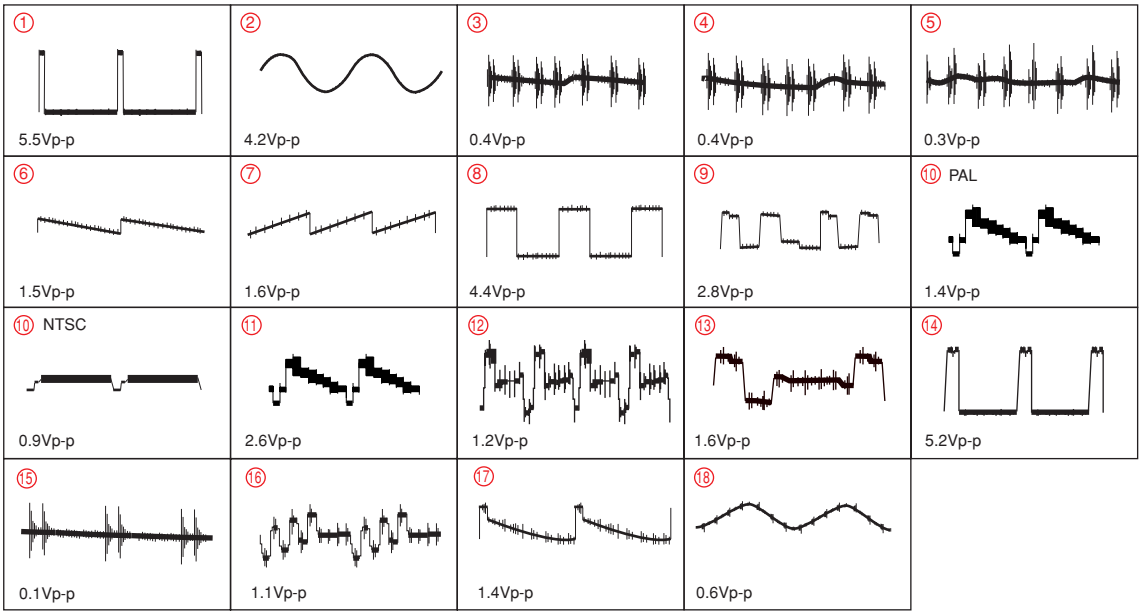
Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q5400	B	1.5	Q5404	B	5.2
	C	8.4		C	0
	E	0.9		E	5.9
Q5401	B	1.6	Q5405	B	5.9
	C	5.2		C	0
	E	1.0		E	6.2
Q5402	B	7.2	Q5406	B	134
	C	9.0		C	67.7
	E	6.6		E	134
Q5403	B	6.6	Q5407	B	1.3
	C	9.0		C	67.8
	E	6.2		E	0.8

D BOARD VOLTAGE LIST

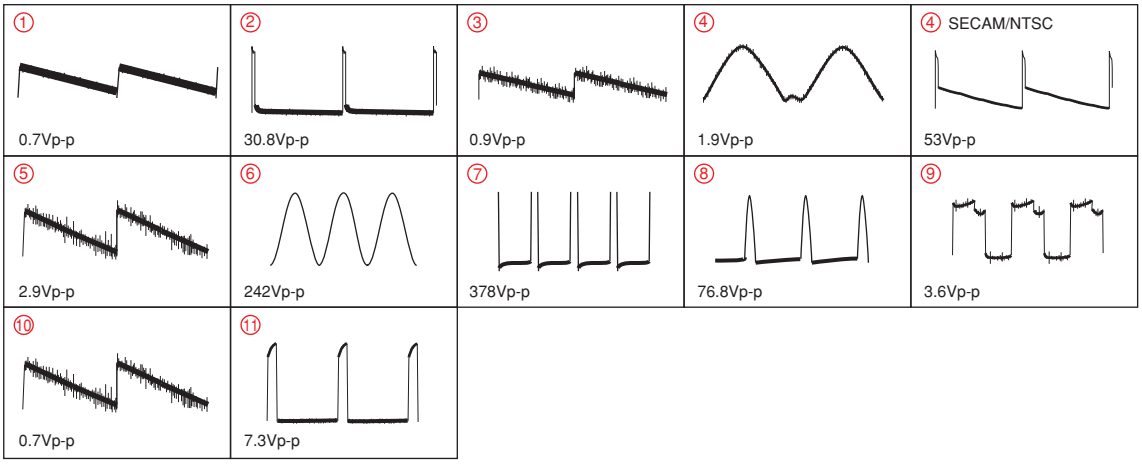
Ref	Pin No.	Voltage[v]
IC6600	1	2.7
	2	1.9
	3	2.2
	4	2.5
	5	0
	6	0
	7	4.6
	8	17.8
	9	0.01
	10	10.4
	11	0
	12	4.8
	13	✻
	14	139
	15	129
	16	133
	17	✻
	18	294
IC6601	1	2.4
	2	0
	3	5.0
IC6607	1	134
	2	2.5
	3	8.8
	4	0
IC6608	1	0.04
	2	0.04
	3	18
	4	7.0
	5	4.2
	6	7.0
	7	4.1
	8	3.2
	9	5.0
	10	8.8
	11	5.0
	12	0
	13	0.11
	14	18
IC6800	1	1.1
	2	13.5
	3	-13.6
	4	-15
	5	0.4
	6	14
	7	1.1
IC6801	1	8.0
	2	1.5
	3	3.1
	4	0
	5	3.8
	6	6.6
	7	0.2
	8	9.0
IC6804	I	11.1
	G	0
	O	9.0
IC6805	I	14
	G	0
	O	11.9
IC6806	I	✻
	G	✻
	O	✻
	VC	✻
Q6100	D	302
	G	0.9
	S	0
Q6102	B	0.4
	C	1.0
	E	0
Q6600	D	297
	G	134
	S	130
Q6601	B	-0.02
	C	12
	E	0
Q6602	B	0.3
	C	18
	E	0
Q6603	D	131
	G	4.8
	S	0
Q6604	B	16.9
	C	17.6
	E	17.7
Q6605	B	0.8
	C	0.13
	E	0.12
Q6608	B	0.6
	C	0
	E	0
Q6609	B	4.9
	C	0
	E	5.0
Q6610	B	0.5
	C	4.9
	E	0.2
Q6611	B	0.4
	C	7.1
	E	0
Q6613	B	0
	C	0.6
	E	0
Q6614	B	17.6
	C	0
	E	17.7
Q6617	B	0
	C	7.0
	E	0
Q6618	B	7.0
	C	0
	E	7.0
Q6800	B	-0.5
	C	13.9
	E	0.9
Q6803	B	7.0
	C	0
	E	7.0
Q6804	B	8.0
	C	9.0
	E	8.0
Q6805	B	-0.3
	C	68
	E	0
Q6806	B	-0.3
	C	59
	E	0
Q6809	D	20.0
	G	2.7
	S	0
Q6810	D	136
	G	1.7
	S	0
Q6811	B	0
	C	9.0
	E	0
Q6812	B	-0.8
	C	81
	E	0
Q6813	B	0.4
	C	6.4
	E	0
Q6814	B	9.1
	C	3.0
	E	9.0
Q6815	B	135
	C	134
	E	135
Q6816	B	0.6
	C	0
	E	0
Q6817	B	0
	C	0.5
	E	0
Q6818	B	3.0
	C	0
	E	0
Q6819	B	-9.0
	C	-9.4
	E	-12.9
Q6820	B	0.2
	C	0.3
	E	0
Q6821	B	0
	C	-10.9
	E	0
Q6823	B	0
	C	8.9
	E	3.1

8-4. WAVEFORMS

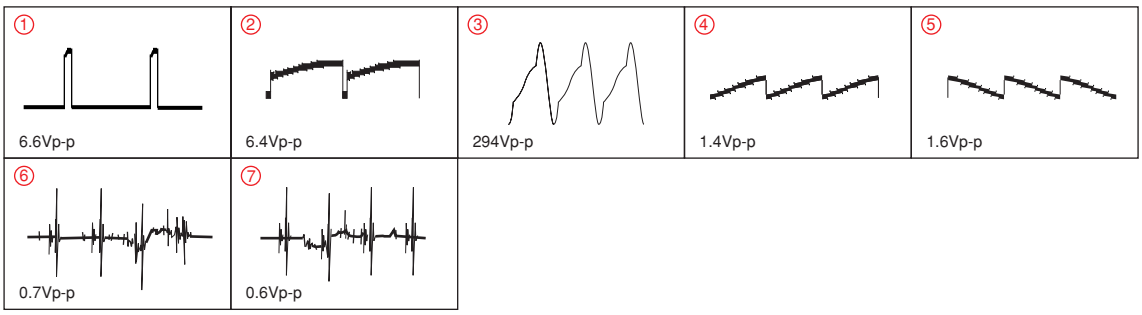
A BOARD WAVEFORMS



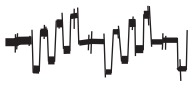
D BOARD WAVEFORMS



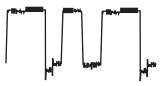
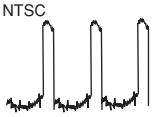
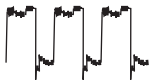
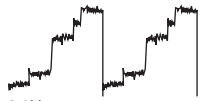
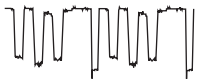
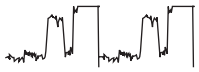
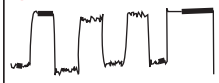
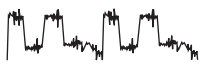
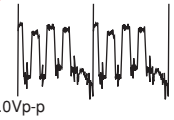
D1 BOARD WAVEFORMS



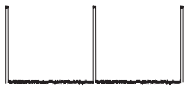
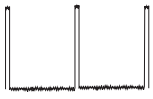
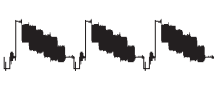
B3 BOARD WAVEFORMS

①  0.8Vp-p	② 0.9Vp-p	③ 1.0Vp-p	④ 1.6Vp-p	⑤ 1.4Vp-p
⑥ 1.4Vp-p	⑦ 6.8Vp-p			

C BOARD WAVEFORMS

① PAL  120Vp-p	① NTSC  0.6Vp-p	② PAL  122Vp-p	② SECAM 5.0Vp-p	② NTSC  3.0Vp-p
③ PAL  120Vp-p	③ NTSC 114Vp-p	③ NTSC  106Vp-p	④ PAL 0.1Vp-p	④ NTSC  106Vp-p
⑤ PAL  4.0Vp-p	⑤ SECAM/NTSC 0.3Vp-p	⑥ PAL 4.1Vp-p	⑥ NTSC 2.2Vp-p	⑦ PAL  4.0Vp-p
⑦ NTSC 4.6Vp-p	⑦ NTSC 3.7Vp-p			

V2 BOARD WAVEFORMS

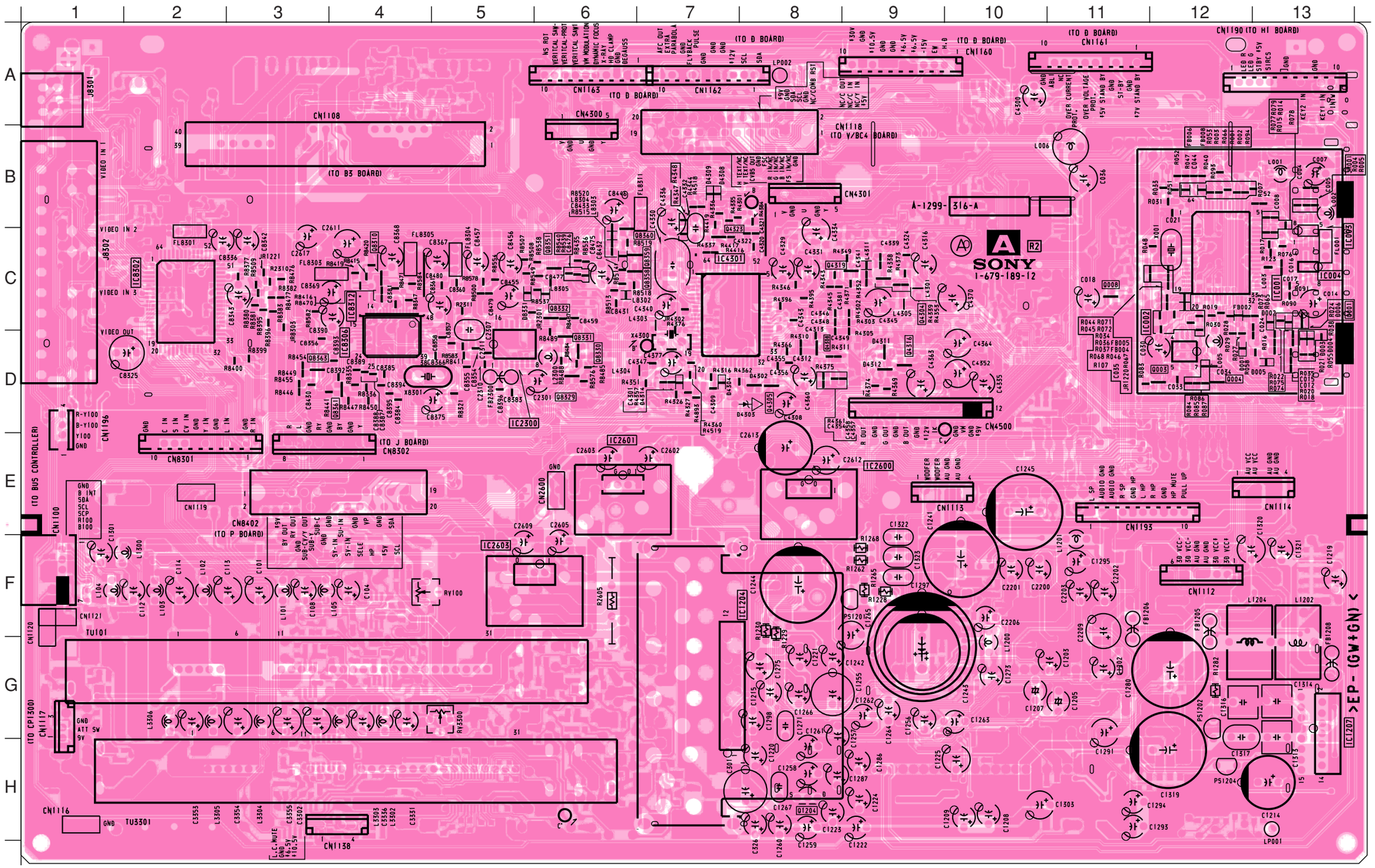
① 0.6Vp-p	②  3.7Vp-p	③  4.0Vp-p	④  1.2Vp-p

8-5. PRINTED WIRING BOARDS AND PARTS LOCATION

PRINTED WIRING BOARDS

A [MAIN MICON, TUVIF, AUDIO AMPLIFIER, RGB OUT, YCT, COMB FILTER, VIDEO/AUDIO IN/OUT]

– A Board – (Component Side)



A BOARD (Componet Side)

IC	
IC001	C-13
IC002	C-11
IC003	C-13
IC004	C-13
IC1204	F-7
IC1207	G-13
IC2300	D-5
IC2600	E-9
IC2601	E-6
IC2603	F-5
IC4301	C-7
IC8302	C-2
IC8306	D-4
IC8312	C-4

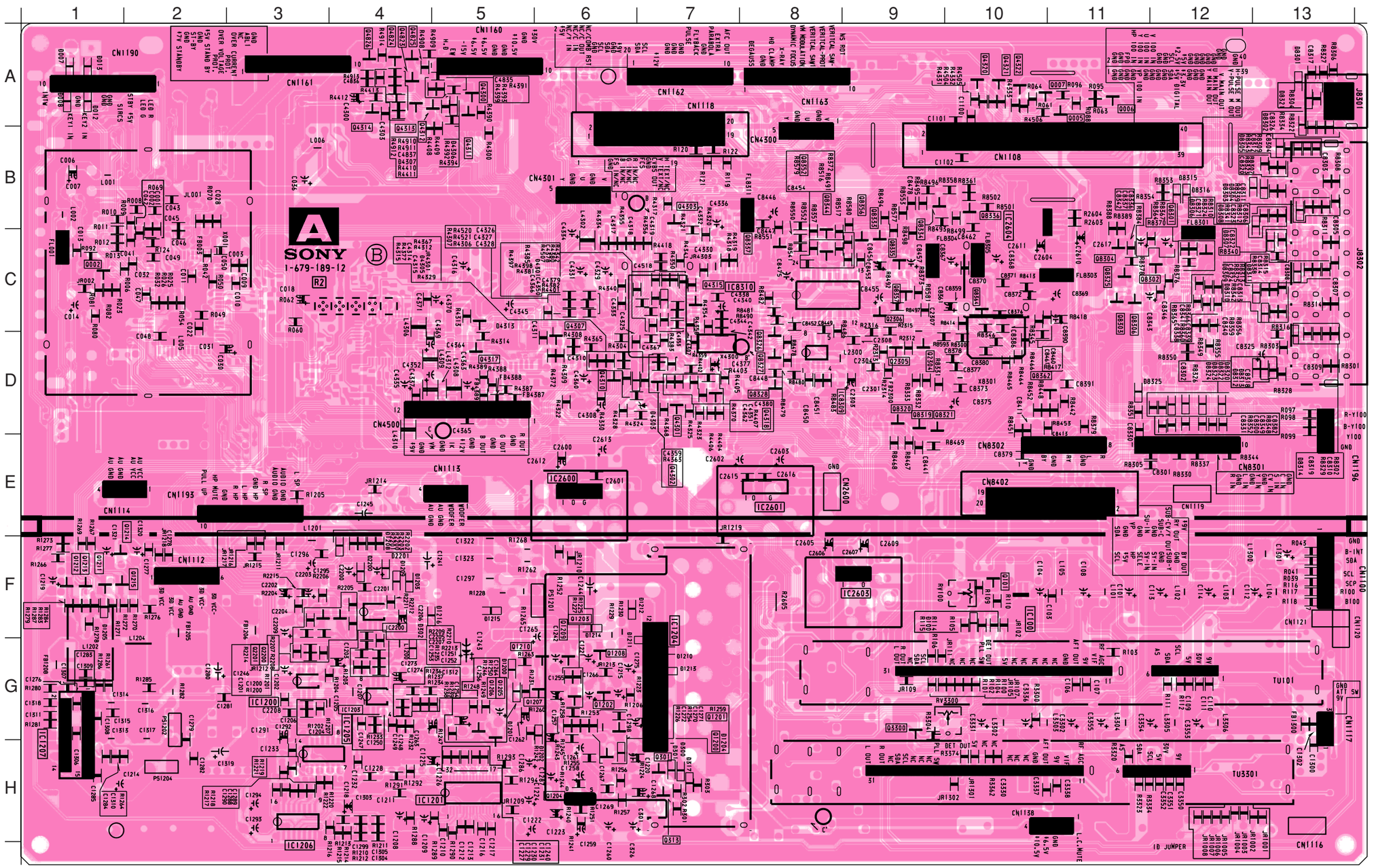
TRANSISTOR	
Q001	C-13
Q003	D-12
Q004	D-12
Q008	C-11
Q1204	H-8
Q4304	C-9
Q4305	D-8
Q4306	D-7
Q4308	D-8
Q4316	D-9
Q4319	C-8
Q4323	B-7
Q8310	C-4
Q8329	D-6
Q8330	D-6
Q8331	D-6
Q8332	C-6
Q8351	C-6
Q8358	C-7
Q8359	C-7
Q8360	C-7
Q8361	D-4
Q8363	D-3

DIODE	
D001	D-12
D002	C-13
D003	D-13
D004	D-13
D005	D-12
D006	C-13
D1214	F-8
D4302	D-8
D4303	D-8
D4308	B-7
D4309	B-7
D4311	D-9
D4312	D-9
D4314	D-7
D8331	C-5

- ▒ : Pattern from the side which enables seeing.
- ▒ : Pattern from the rear side.

A [MAIN MICON, TUVIF, AUDIO AMPLIFIER, RGB OUT, YCT, COMB FILTER, VIDEO/AUDIO IN/OUT]

– A Board – (Conductor Side)



A BOARD (Conductor Side)

IC			
IC001	F-10	Q8320	D-9
IC1200	G-3	Q8321	D-10
IC1201	H-4	Q8325	C-11
IC1203	G-4	Q8326	D-8
IC1204	F-7	Q8327	D-8
IC1205	G-4	Q8328	D-8
IC1206	H-3	Q8333	B-9
IC1207	H-1	Q8334	B-9
IC2200	F-4	Q8335	C-9
IC2600	E-6	Q8336	B-10
IC2601	E-8	Q8337	C-8
IC2603	F-9	Q8344	B-8
IC2604	B-10	Q8352	B-8
IC8309	D-9	Q8356	B-9
IC8310	C-7	Q8357	C-9
TRANSISTOR		Q8357	C-9
Q002	C-1	Q8362	D-10
Q005	A-1	Q8364	C-10
Q006	A-11	**DIODE**	
Q007	A-11	D007	A-1
Q101	F-10	D008	A-1
Q301	H-7	D012	A-1
Q313	H-7	D013	A-1
Q1200	G-7	D100	F-9
Q1201	G-7	D300	H-7
Q1202	G-6	D301	H-7
Q1203	F-6	D302	F-4
Q1204	H-6	D317	H-7
Q1205	G-5	D1200	G-5
Q1206	G-5	D1201	G-5
Q1207	G-5	D1202	H-6
Q1208	F-6	D1203	F-4
Q1209	F-6	D1204	G-7
Q1210	G-5	D1205	F-1
Q1211	F-1	D1208	F-4
Q1212	F-1	D1209	F-4
Q1213	F-1	D1210	G-7
Q1214	E-2	D1211	F-6
Q1215	F-2	D1212	F-6
Q2200	G-3	D1213	G-7
Q2201	G-3	D1215	F-5
Q2304	D-9	D1216	F-5
Q2305	D-9	D2200	F-4
Q2306	C-9	D2201	F-4
Q3300	G-9	D4303	D-7
Q4300	A-5	D4304	D-7
Q4301	D-7	D4305	C-4
Q4302	E-7	D4306	B-5
Q4303	B-7	D4307	B-4
Q4307	C-6	D4313	C-5
Q4310	D-6	D8301	A-13
Q4311	B-5	D8302	A-13
Q4312	B-4	D8303	B-12
Q4313	B-4	D8304	B-12
Q4314	B-4	D8305	B-12
Q4315	C-7	D8306	B-12
Q4317	D-5	D8307	C-12
Q4318	D-8	D8308	B-12
Q4320	A-10	D8309	C-12
Q4321	A-10	D8310	C-12
Q4322	A-10	D8311	C-12
Q4823	A-4	D8312	D-12
Q4824	A-4	D8313	D-12
Q4825	A-4	D8314	E-13
Q4826	A-4	D8315	B-12
Q8301	B-12	D8316	B-12
Q8302	C-12	D8320	D-12
Q8303	C-11	D8321	A-13
Q8304	C-11	D8322	D-12
Q8306	C-11	D8323	D-12
Q8319	D-9	D8324	D-12
		D8325	D-12

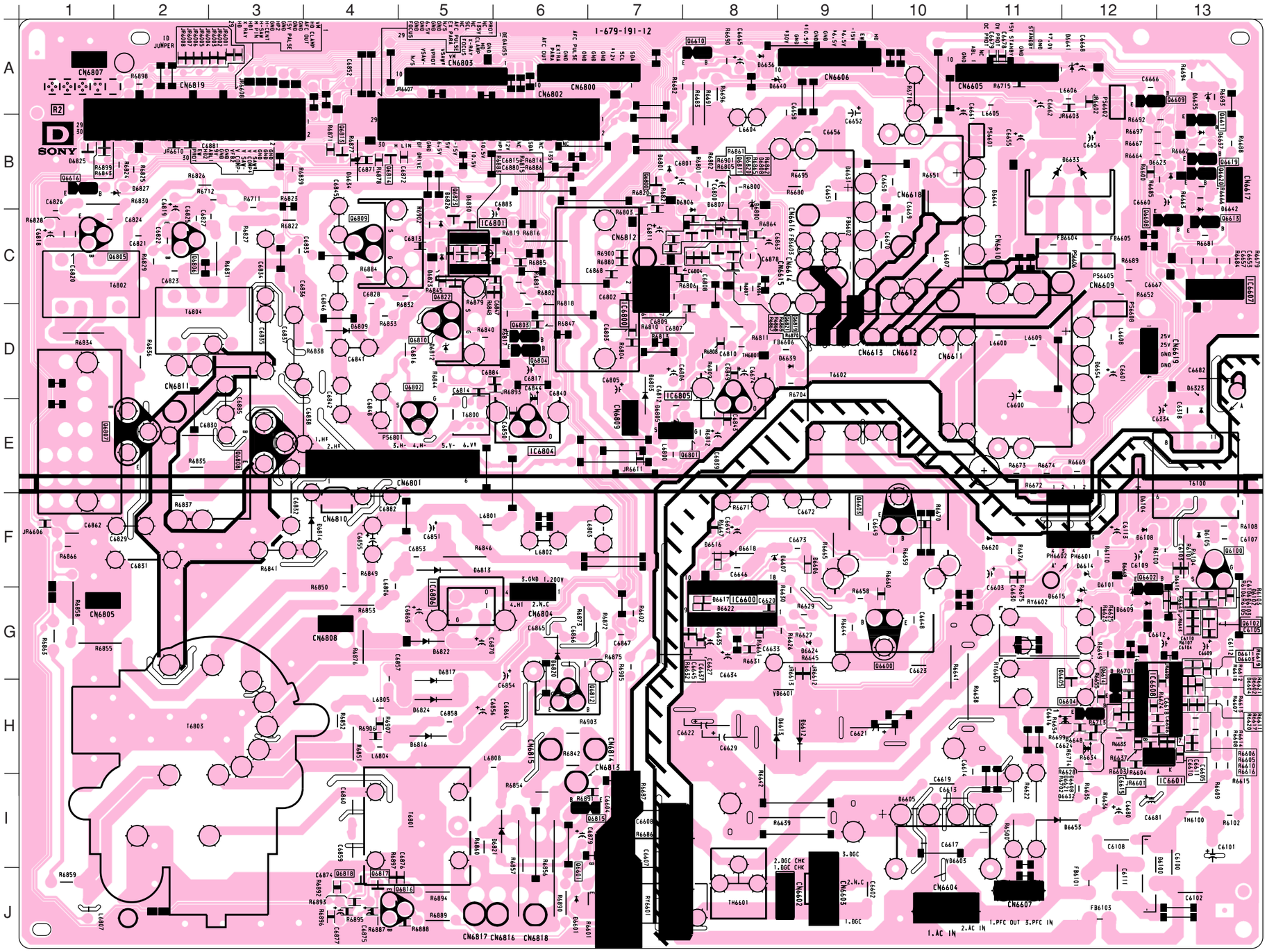
KV-EX29M61
RM-964

PRINTED WIRING BOARDS

D [POWER SUPPLY, DEFLECTION HV]

NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

– D Board –



KV-EX29M61
RM-964

PRINTED WIRING BOARDS

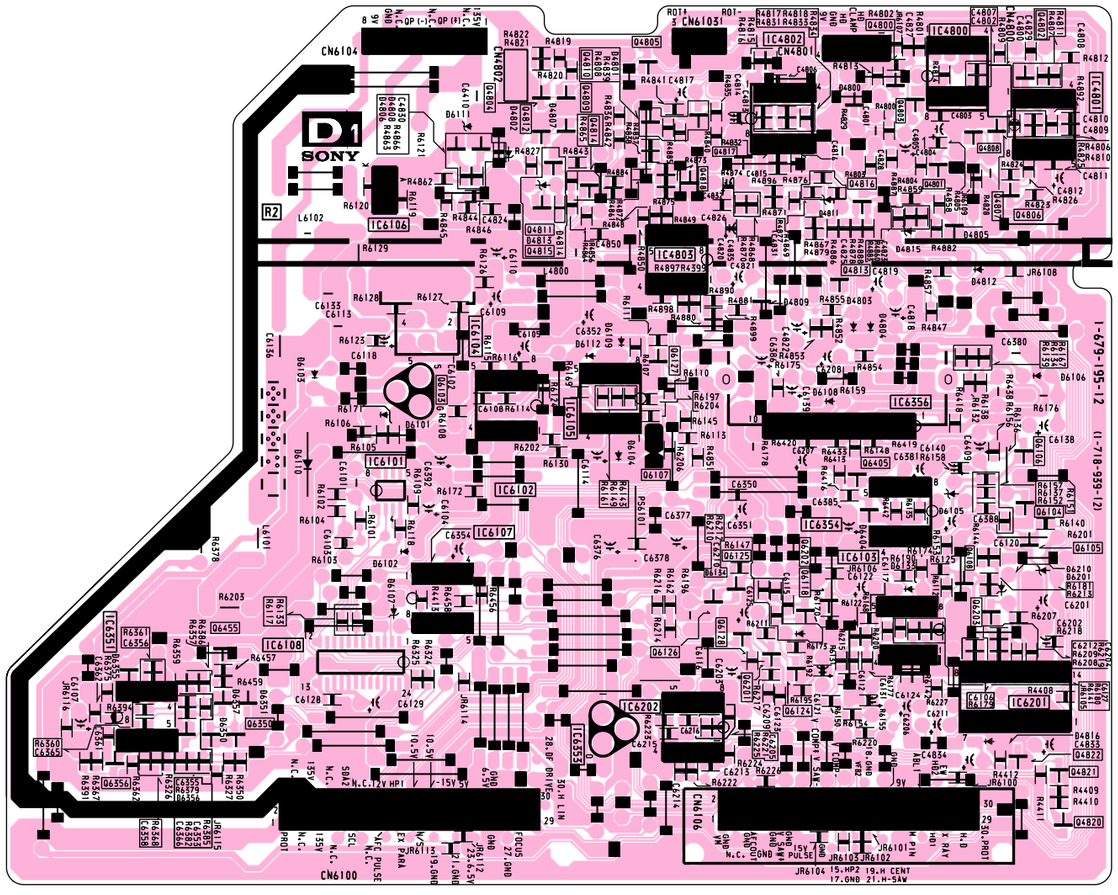
D1 [DYNAMIC FOCUS, DYNAMIC QUAD POLE DRIVE, HORIZONTAL DRIVE GENERATOR]

H1 [AC SW, AV INPUT, PRESET KEY, PHONE OUT,LED, SIRCS RECEIVER]

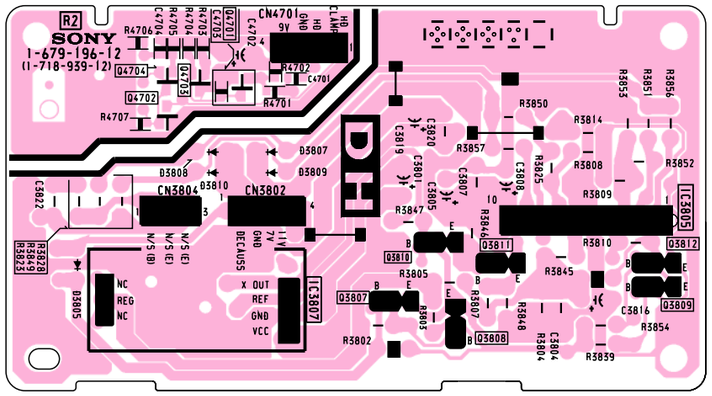
DH [MAGNETIC FIELD CORRECTION]

J [COMPONENT IN]

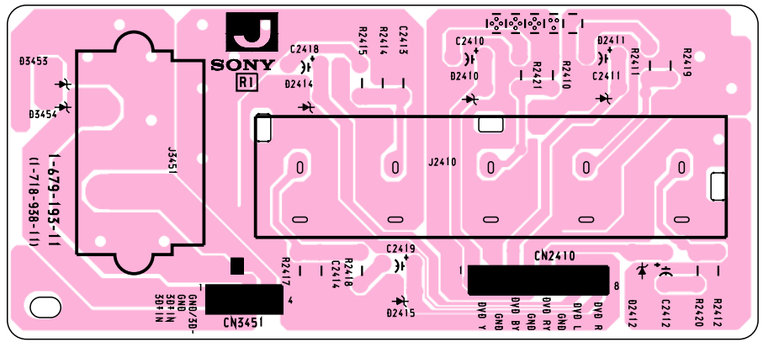
– D1 Board –



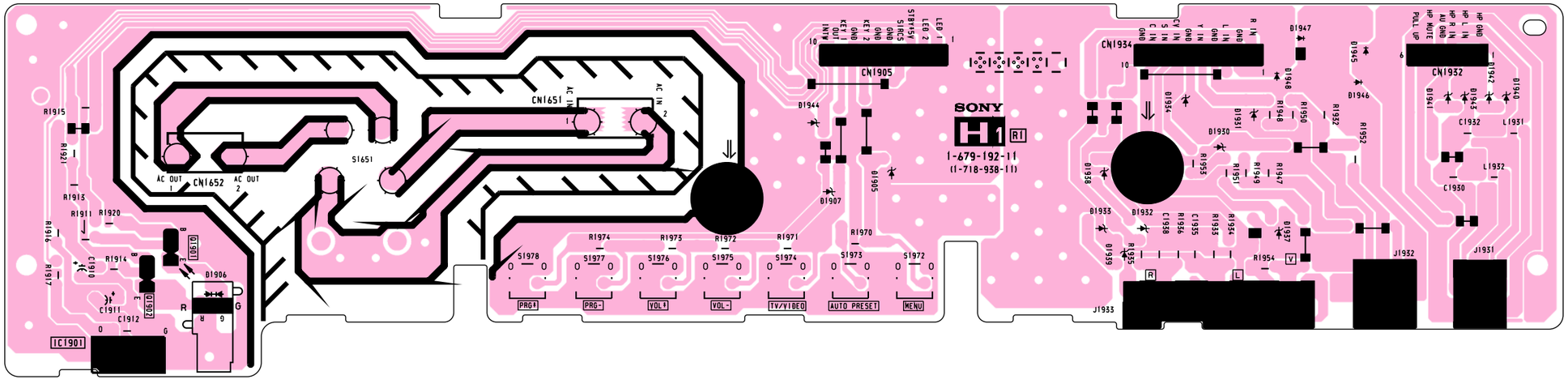
– DH Board –



– J Board –



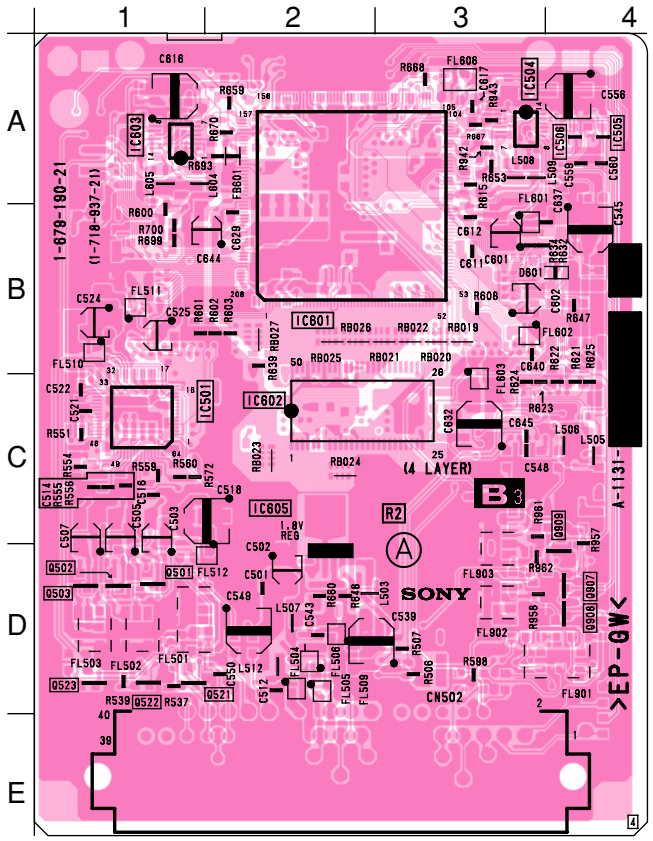
– H1 Board –



PRINTED WIRING BOARD

B3 [DIGITAL REALITY CREATION]

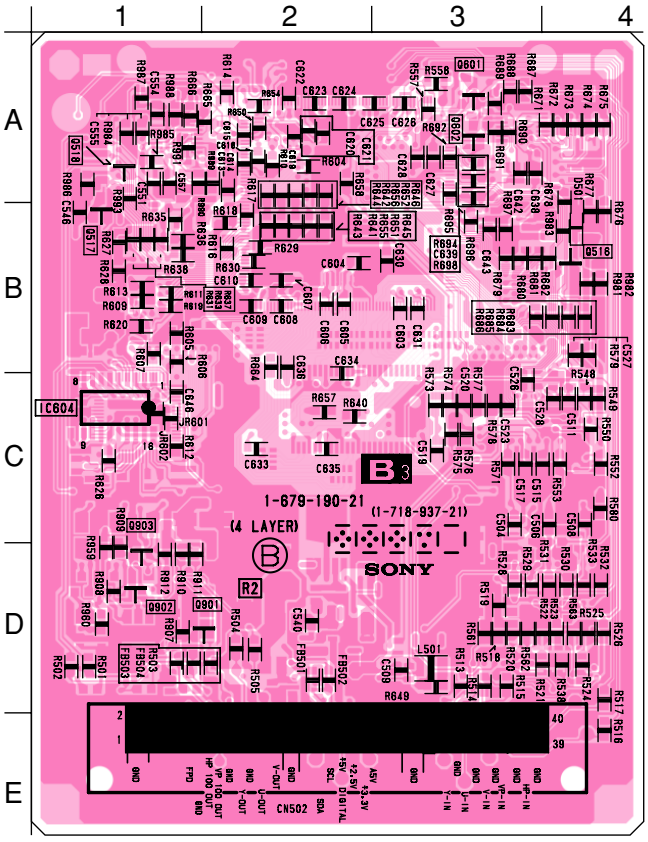
– B3 Board – (Component Side)



B3 BOARD (Component Side)

IC	
IC501	C-1
IC504	A-3
IC505	A-4
IC505	A-4
IC601	B-2
IC602	C-2
IC603	A-1
TRANSISTOR	
Q501	D-1
Q502	D-1
Q503	D-1
Q521	D-2
Q522	D-1
Q523	D-1
Q907	D-4
Q908	D-4
Q909	C-4
DIODE	
D601	B-3

– B3 Board – (Conductor Side)



B3 BOARD (Conductor Side)

IC	
IC604	C-1
TRANSISTOR	
Q516	B-4
Q517	B-1
Q518	A-1
Q601	A-3
Q602	A-3
Q901	D-2
Q902	D-1
Q903	C-1
TRANSISTOR	
D501	A-4

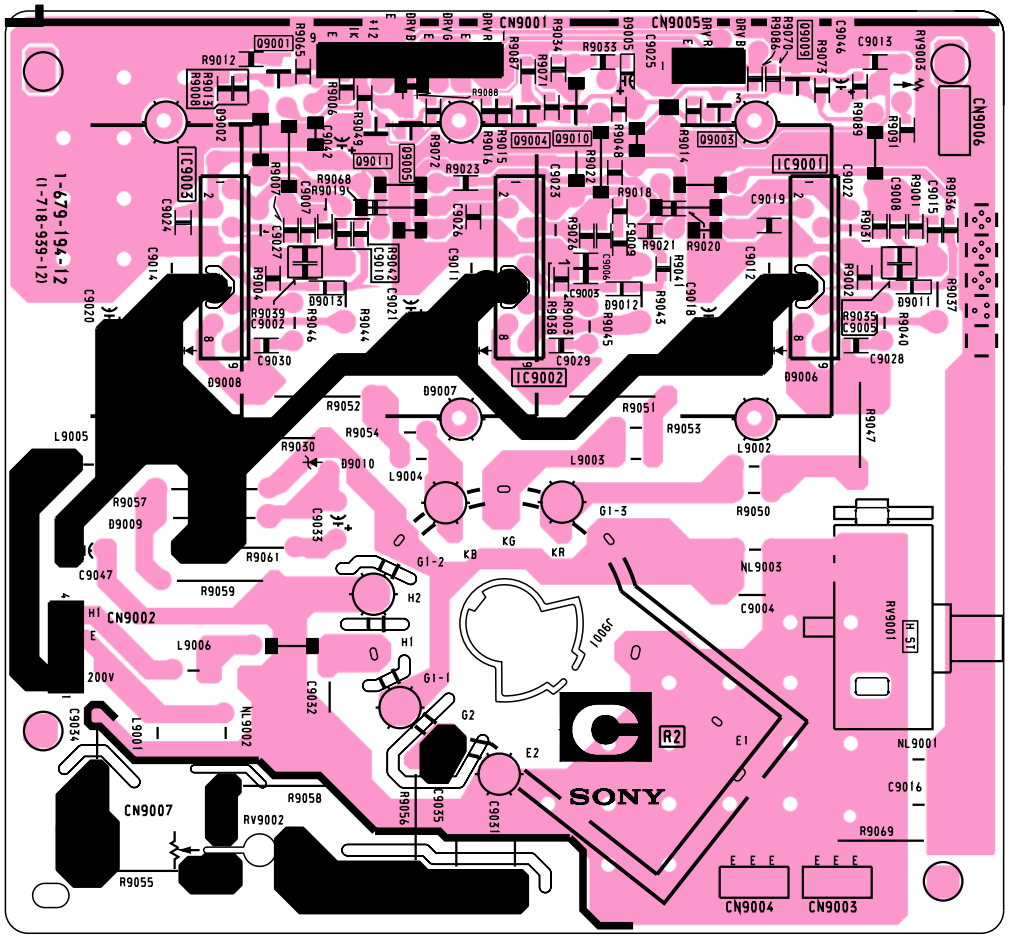
- :Pattern from the side which enable seeing.
- :Pattern from the rear side.

PRINTED WIRING BOARDS

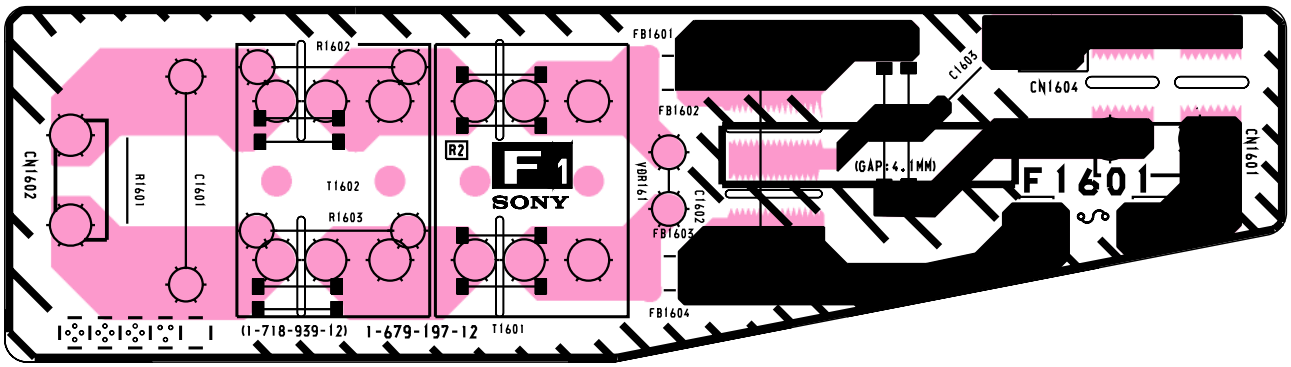
C [VIDEO AMPLIFIER]

F1 [AC LINE FILTER]

– C Board –



– F1 Board –

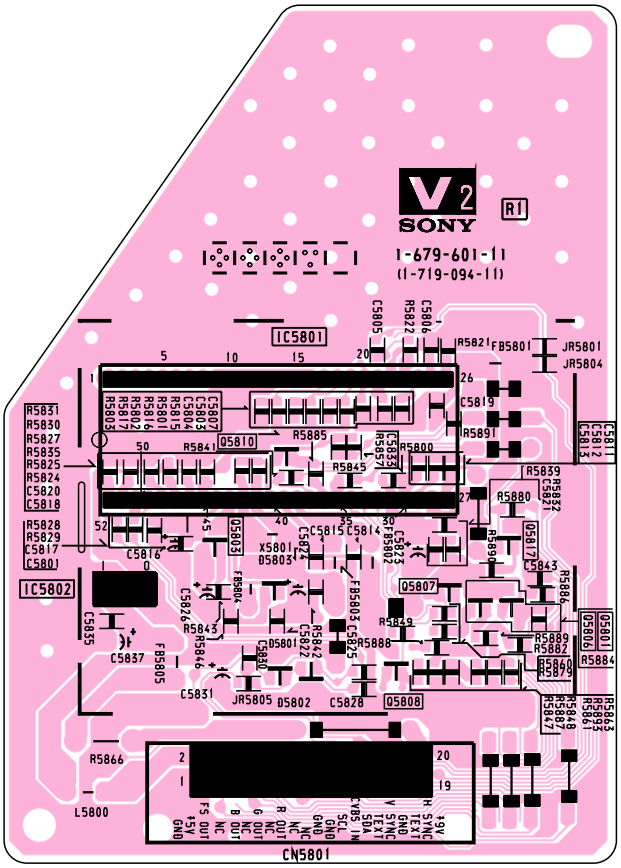


PRINTED WIRING BOARDS

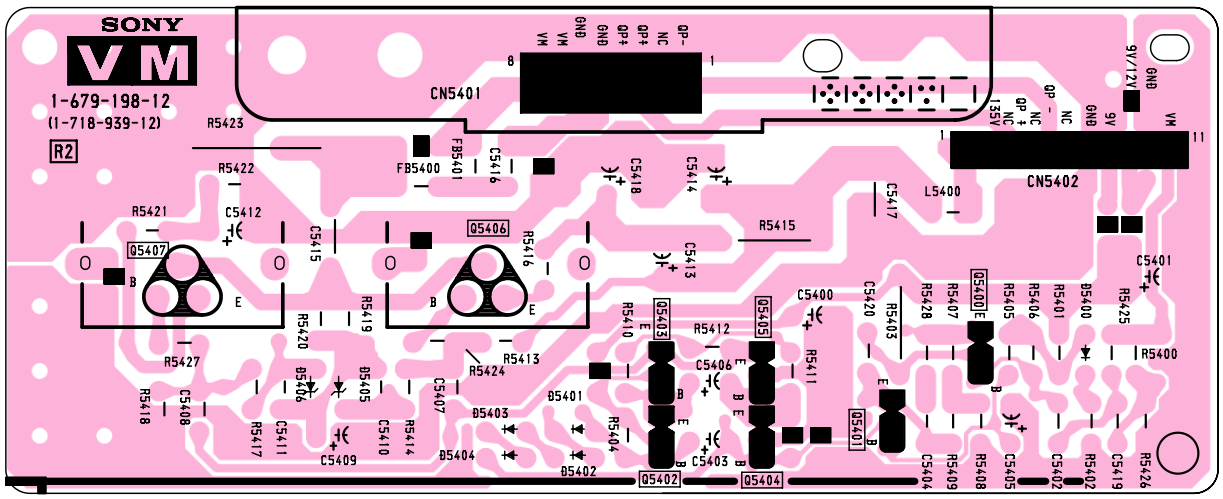
V2 [TELETEXT]

VM [VELOCITY MODULATION]

– V2 Board –

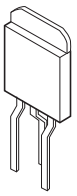
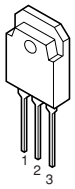
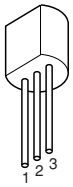
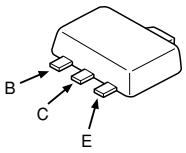
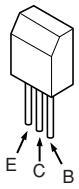
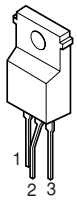


– VM Board –



8-6 SEMICONDUCTORS

TRANSISTOR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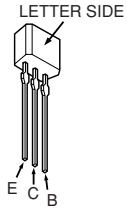
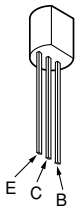
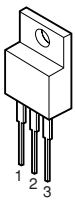
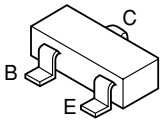
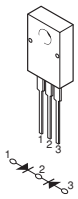
DIODE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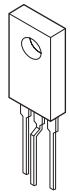	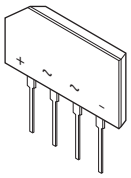	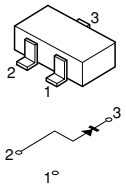	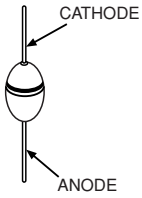	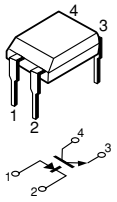	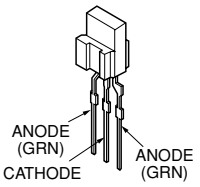
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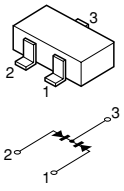	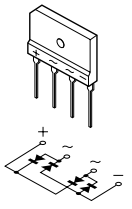	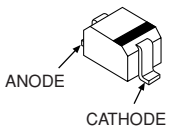		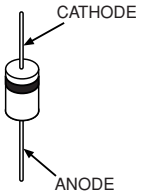	
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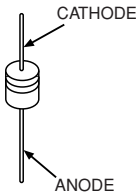
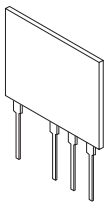
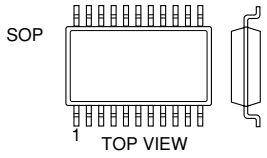
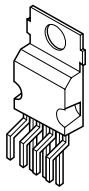
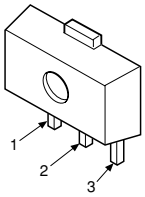
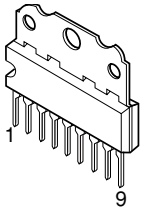
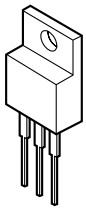
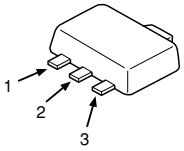
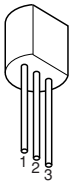
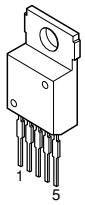
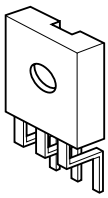
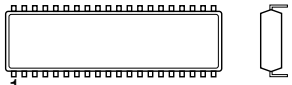
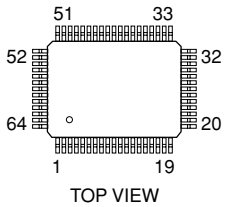
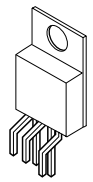
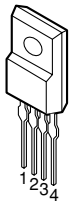
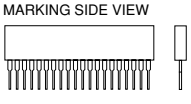
DIODE

IC

				 Single In -line Package Pin 8~98	
MMDL914T1	D1NS4 RD5.1ESB2 RD2.2ESB2 RD10ESB2 RD2.7ESB2 RD4.7ESB2 RD12ESB1 RD30ESB2 RD22ESB1 ERA85-009	ERA38-06 D1N20R RD18ES-B2 RD18ESB RD3.6ES-B1 RD6.8ES-B1 RD7.5ES-B2 RD15ES-B1 RD3.9ES-B2	DM-58	BH3868BFS-E2 CXA1211M MB88141APF-ER MM1115XFBE MM1476AF(TP) M24C16-MN6T NJM2188M-TE2 NJM4560M	TC7SET08FU(TE85) TDA9178T/N1.118 TLC2932IPW TLC2933IPWR UPC358C UPC4558G2

					
STV9379	S-80743AL-A7-S	TDA6111Q/N4	TA7805S PQ09RF2 2SK2251-01	PQ07VZ012ZP	UPC1093J-1-T TA78L05S

		 Dual In-line Package Pin 6~98			
LA6500-FA LA6510	SBX1981-51RP	CA0007AD CA0005AD MCZ3001D NJM3404ADW LM393N	NJU4066BM TDA9181T UPC399-C SAA5261	TLC5733AIPM CXA2069Q CXA2100AQ CXP750096-034Q CXA2163Q-T6	

		 Single In-line Package Pin 6~99			
BA033T	PQ05RF2	AN7583Z			

SECTION 9
EXPLODED VIEWS

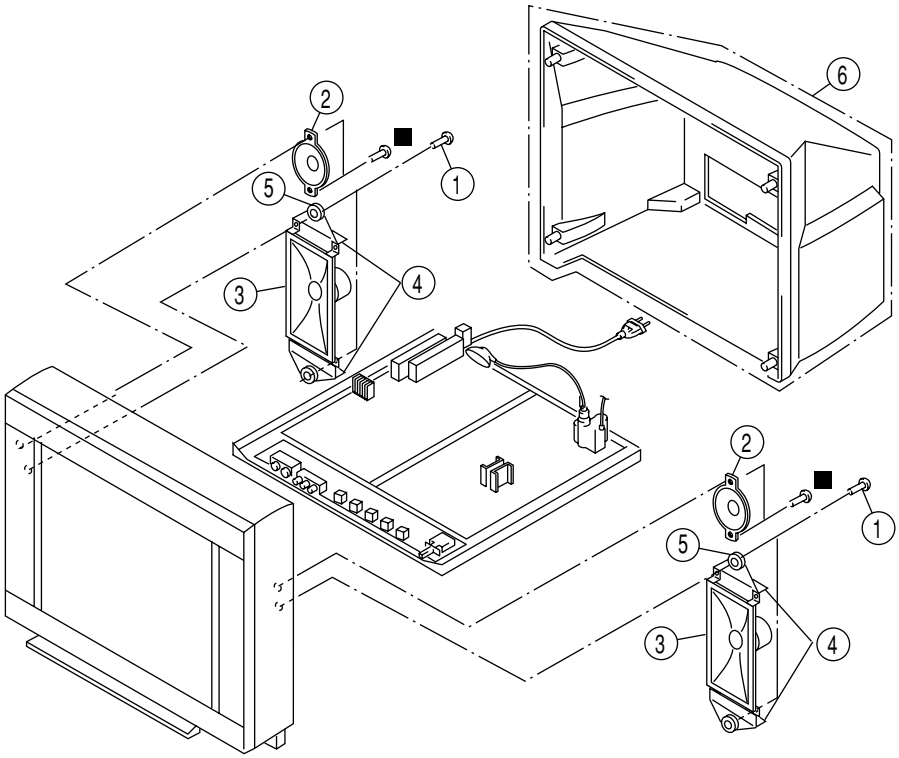
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

9-1. SPEAKER BRACKET

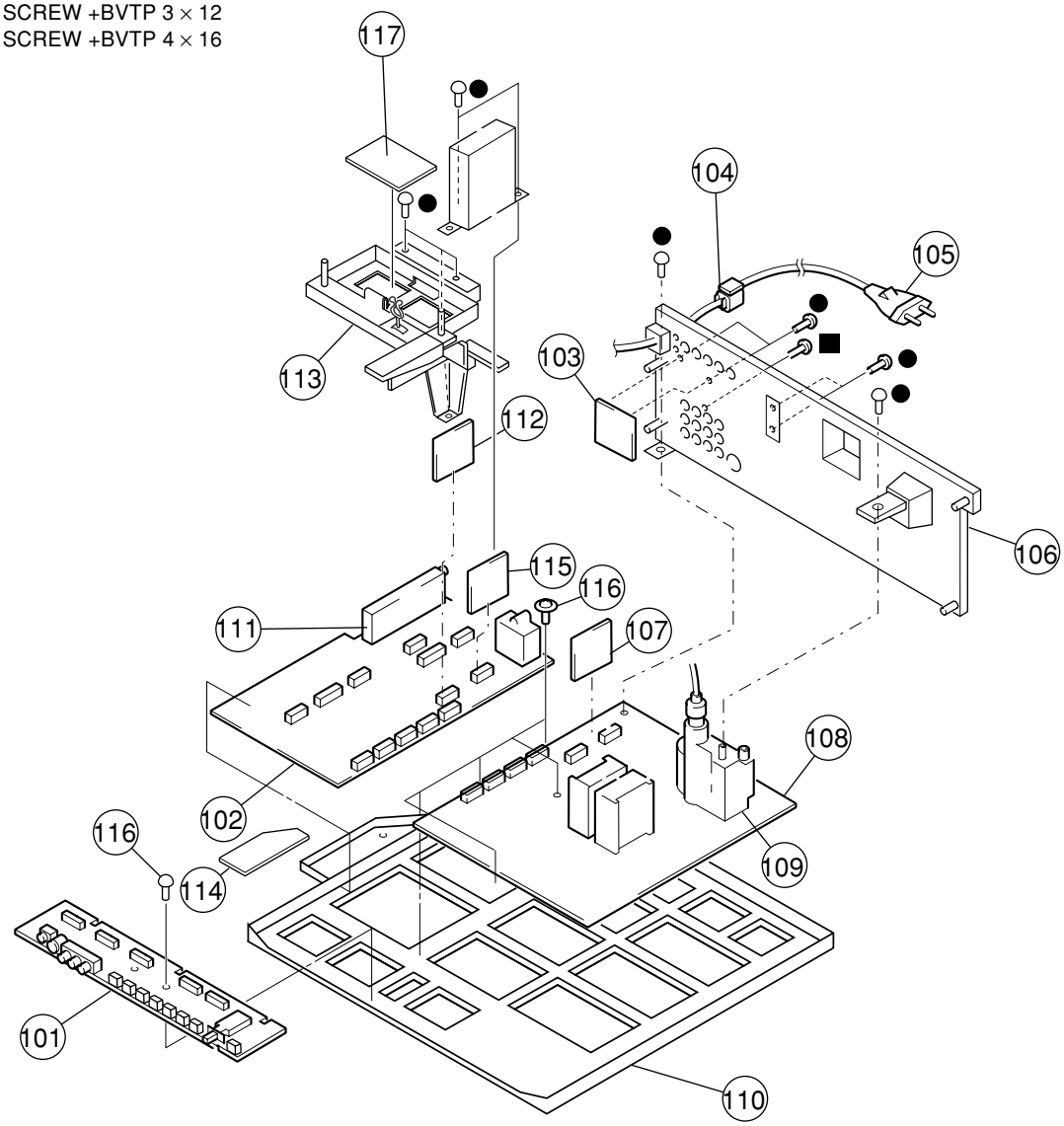
■ : 7-685-663-71 SCREW +BVTP 4 × 16



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		4-302-404-03	SCREW (WASHER HEAD) (+P 4 x 16)	
2		1-529-968-21	SPEAKER (5CM)	
3		1-529-563-11	SPEAKER (15 x 6.5CM)	
4	*	4-046-981-01	BRACKET, SPEAKER	
5		4-374-745-21	CUSHION (A)	
6		X-4038-161-1	COVER ASSY REAR (■ 12 SCREWS)	

9-2. CHASSIS

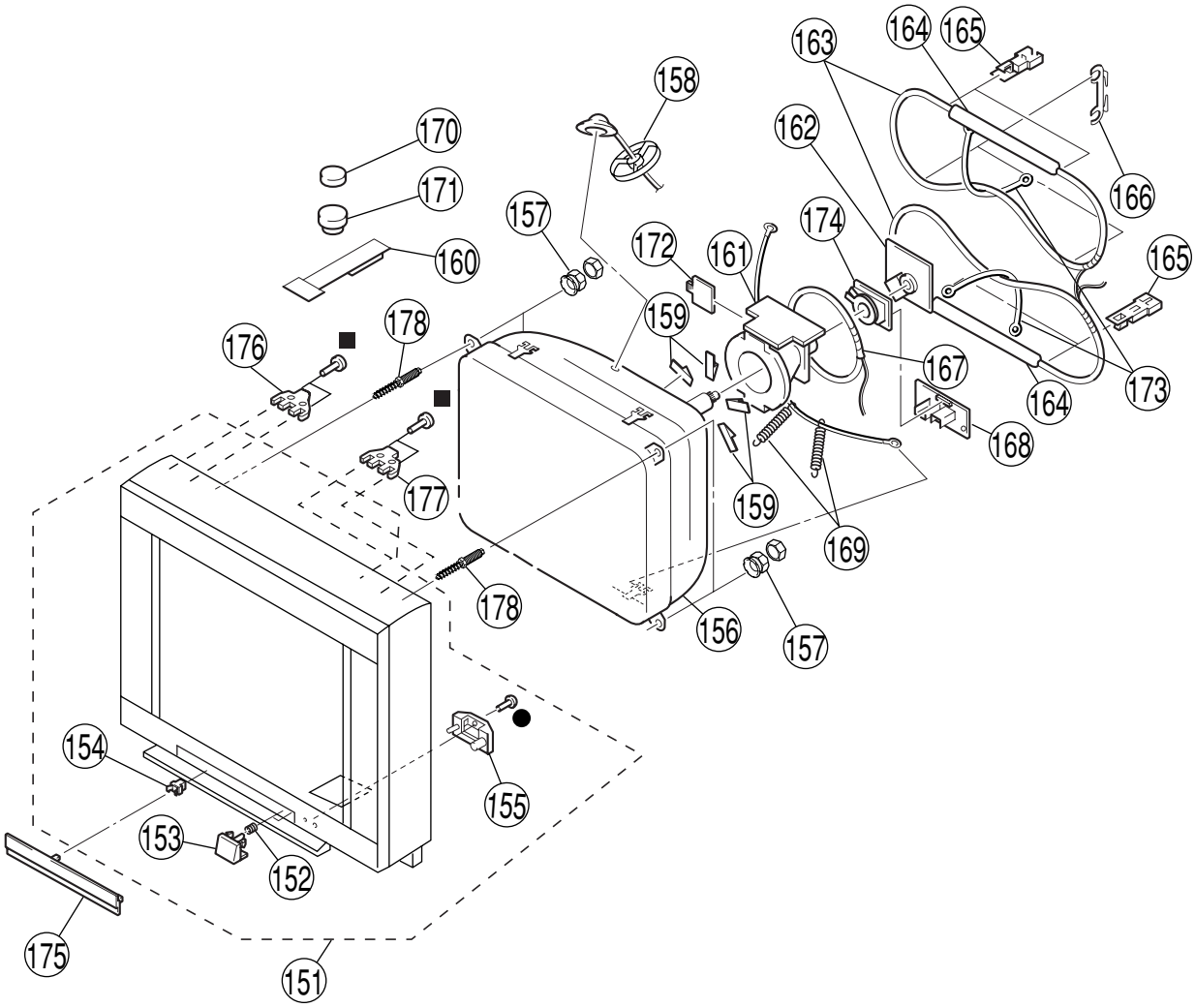
● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16



REF. NO.		PART NO.	DESCRIPTION	REMARK
101	*	A-1372-869-A	H1 BOARD, MOUNTED	
102	*	A-1299-657-A	A BOARD, COMPLETE	
103	*	A-1388-332-A	J BOARD, MOUNTED	
104	⚠	4-022-115-12	HOLDER, AC CORD	
105	⚠	1-823-551-11	CORD AC, POWER (WITH CONNECTOR)	
106	*	4-075-447-81	BRACKET, TERMINAL	
107	*	A-1343-928-A	D1 BOARD, MOUNTED	
108	*	A-1346-975-A	D BOARD, COMPLETE	
109	⚠	1-453-363-11	TRANSFORMER ASSY, FLYBACK (NX-4522//J1B4)	
110	*	4-075-446-01	BRACKET, MAIN	
111		8-598-451-20	TUNER, FSS BTF-WG441	
112	*	A-1347-165-A	V2 BOARD, COMPLETE	
113	*	4-076-315-02	BRACKET, PWB	
114	*	A-1241-437-A	F1 BOARD, MOUNTED	
115	*	A-1136-132-A	B3 BOARD, COMPLETE	
116		4-046-797-01	SCREW (3 x 12), (+)BVTAP	
117	*	A-1333-004-A	DH BOARD MOUNTED	

9-3. PICTURE TUBE

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16



REF. NO.		PART NO.	DESCRIPTION	REMARK
151		X-4039-625-1	BEZNET ASSY	152-155
152		4-036-405-11	SPRING, COMPRESSION	
153		4-075-747-01	BUTTON, POWER	
154		4-047-464-01	CATCHER, PUSH	
155	*	4-075-749-01	GUIDE, LIGHT	
156	⚠	8-735-056-05	PICTURE TUBE (M68LNH070X)	
157		4-387-204-01	NUT, SPECIAL, CRT	
158	*	3-704-372-11	HOLDER, HV CABLE	
159		4-046-600-11	SPACER DY	
160		X-4387-214-3	PERMALOY ASSY, CORRECTION	
161	⚠	8-451-504-61	DEFLECTION YOKE (Y29RSC-S2)	
162	*	A-1332-101-A	C BOARD, MOUNTED	
163	⚠	1-419-294-11	COIL, DEGAUSSING	
164		4-063-935-21	CUSHION (50 x 550), DGC	
165		4-062-970-12	CLIP (29RSN), DGC	

REF. NO.		PART NO.	DESCRIPTION	REMARK
166		4-064-883-03	HOLDER, DGC	
167		1-452-896-11	COIL, NA ROTATION (RT200)	
168	*	A-1342-570-A	VM BOARD, MOUNTED	
169		4-369-318-61	SPRING, TENSION	
170		1-452-032-00	MAGNET, DISC	
171		1-452-094-00	CIRCULAR DISC MAGNET B	
172		4-077-228-02	PIECE, TLH CONVERGENCE	
173		4-079-376-01	BAND, DGC	
174		8-453-011-41	NA299-C	
175		4-075-748-91	CONTROL, DOOR	
176		X-4038-460-3	CRT (TOP LEFT) SUPPORT ASSY	
177		X-4038-461-3	CRT (TOP RIGHT) SUPPORT ASSY	
178		4-079-175-01	SCREW CRT (TAPPING 7+M 8)	

SECTION 10
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF NO.	PART NO.	DESCRIPTION			REMARK
*	A-1299-657-A	A BOARD COMPLETE			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C001	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C002	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C004	1-163-001-11	CERAMIC CHIP	220PF	10.00%	50V
C005	1-163-001-11	CERAMIC CHIP	220PF	10.00%	50V
C006	1-107-725-11	CERAMIC CHIP	0.1UF	10.00%	16V
C007	1-126-933-11	ELECT	100UF	20.00%	16V
C009	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C010	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C012	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C013	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C014	1-126-967-11	ELECT	47UF	20.00%	50V
C015	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C016	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C017	1-163-247-91	CERAMIC CHIP	68PF	5.00%	50V
C021	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C022	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C024	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C028	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C030	1-126-947-11	ELECT	47UF	20.00%	25V
C031	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C032	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C033	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C034	1-163-259-91	CERAMIC CHIP	220PF	5.00%	50V
C035	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C036	1-104-665-11	ELECT	100UF	20.00%	25V
C041	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C042	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C043	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C044	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C045	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C046	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C047	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C048	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C050	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C103	1-107-725-11	CERAMIC CHIP	0.1UF	10.00%	16V
C104	1-126-933-11	ELECT	100UF	20.00%	16V
C107	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C108	1-126-933-11	ELECT	100UF	20.00%	16V
C109	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C110	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C111	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C112	1-126-933-11	ELECT	100UF	20.00%	16V
C113	1-126-967-11	ELECT	47UF	20.00%	50V
C114	1-126-967-11	ELECT	47UF	20.00%	50V
C301	1-126-767-11	ELECT	1000UF	20.00%	16V
C326	1-126-964-11	ELECT	10UF	20.00%	50V
C1100	1-163-239-11	CERAMIC CHIP	33PF	5.00%	50V
C1101	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C1102	1-163-007-11	CERAMIC CHIP	680PF	10.00%	50V
C1200	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C1201	1-216-025-11	RES-CHIP	100	5%	1/10W
C1202	1-126-947-11	ELECT	47UF	20.00%	16V
C1203	1-126-947-11	ELECT	47UF	20.00%	16V
C1204	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C1205	1-107-698-11	ELECT	10UF	20.00%	25V
C1206	1-216-025-11	RES-CHIP	100	5%	1/10W
C1207	1-107-698-11	ELECT	10UF	20.00%	25V
C1208	1-126-960-11	ELECT	1UF	20.00%	50V
C1209	1-126-960-11	ELECT	1UF	20.00%	50V
C1210	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1211	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C1212	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C1213	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C1216	1-164-344-11	CERAMIC CHIP	0.068UF	10.00%	25V
C1217	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C1218	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C1220	1-126-960-11	ELECT	1UF	20.00%	50V
C1222	1-126-963-11	ELECT	4.7UF	20.00%	50V
C1223	1-126-963-11	ELECT	4.7UF	20.00%	50V
C1224	1-126-965-91	ELECT	22UF	20.00%	50V
C1225	1-104-665-11	ELECT	100UF	20.00%	25V
C1226	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1227	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1228	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C1229	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C1230	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C1231	1-164-344-11	CERAMIC CHIP	0.068UF	10.00%	25V
C1232	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C1233	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C1240	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C1241	1-128-550-11	ELECT	2200UF	20.00%	50V
C1243	1-131-612-11	ELECT	6800UF	20%	50V
C1245	1-128-550-11	ELECT	2200UF	20.00%	50V
C1247	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1248	1-216-045-00	RES-CHIP	680	5%	1/10W
C1249	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C1250	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1251	1-216-045-00	RES-CHIP	680	5%	1/10W
C1252	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C1253	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1254	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C1255	1-126-941-11	ELECT	470UF	20.00%	25V
C1256	1-126-964-11	ELECT	10UF	20.00%	50V

A

REF NO.	PART NO.	DESCRIPTION		REMARK	
C1265	1-249-429-11	CARBON	10K	5%	1/4W
C1266	1-126-964-11	ELECT	10UF	20.00%	50V
C1267	1-136-161-00	FILM	0.047UF	5.00%	50V
C1268	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1270	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1271	1-136-161-00	FILM	0.047UF	5.00%	50V
C1273	1-126-964-11	ELECT	10UF	20.00%	50V
C1274	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1275	1-126-948-11	ELECT	100UF	20.00%	35V
C1286	1-126-963-11	ELECT	4.7UF	20.00%	50V
C1287	1-126-963-11	ELECT	4.7UF	20.00%	50V
C1288	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C1289	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1290	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C1291	1-104-665-11	ELECT	100UF	20.00%	25V
C1292	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1293	1-126-964-11	ELECT	10UF	20.00%	50V
C1294	1-126-964-11	ELECT	10UF	20.00%	50V
C1295	1-126-964-11	ELECT	10UF	20.00%	50V
C1296	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1297	1-136-161-00	FILM	0.047UF	5.00%	50V
C1298	1-126-960-11	ELECT	1UF	20.00%	50V
C1299	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1301	1-126-933-11	ELECT	100UF	20.00%	16V
C1302	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1303	1-104-665-11	ELECT	100UF	20.00%	25V
C1304	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1305	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C1312	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1322	1-136-161-00	FILM	0.047UF	5.00%	50V
C2200	1-126-964-11	ELECT	10UF	20.00%	50V
C2201	1-126-964-11	ELECT	10UF	20.00%	50V
C2202	1-126-964-11	ELECT	10UF	20.00%	50V
C2203	1-126-963-11	ELECT	4.7UF	20.00%	50V
C2204	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2205	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2206	1-126-964-11	ELECT	10UF	20.00%	50V
C2207	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2208	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2209	1-126-968-11	ELECT	100UF	20.00%	50V
C2301	1-126-965-91	ELECT	22UF	20.00%	50V
C2303	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2304	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2307	1-136-165-00	FILM	0.1UF	5.00%	50V
C2308	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C2600	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2601	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2602	1-126-933-11	ELECT	100UF	20.00%	16V
C2603	1-126-933-11	ELECT	100UF	20.00%	16V
C2605	1-104-665-11	ELECT	100UF	20.00%	10V
C2606	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2607	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2609	1-104-665-11	ELECT	100UF	20.00%	10V
C2610	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2612	1-104-665-11	ELECT	100UF	20.00%	25V
C2613	1-126-936-11	ELECT	3300UF	20.00%	16V
C2615	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2616	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2617	1-104-665-11	ELECT	100UF	20.00%	10V
C4300	1-126-964-11	ELECT	10UF	20.00%	50V

REF NO.	PART NO.	DESCRIPTION		REMARK	
C4301	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4303	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C4307	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C4308	1-126-960-11	ELECT	1UF	20.00%	50V
C4309	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C4316	1-126-947-11	ELECT	47UF	20.00%	25V
C4317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4318	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4319	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4320	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4321	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4322	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4324	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4325	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C4326	1-164-346-11	CERAMIC CHIP	1UF		16V
C4327	1-164-346-11	CERAMIC CHIP	1UF		16V
C4328	1-164-346-11	CERAMIC CHIP	1UF		16V
C4329	1-126-963-11	ELECT	4.7UF	20.00%	50V
C4330	1-136-244-11	FILM	0.1UF	5.00%	50V
C4331	1-126-959-11	ELECT	0.47UF	20.00%	50V
C4332	1-136-161-00	FILM	0.047UF	5.00%	50V
C4333	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4334	1-126-967-11	ELECT	47UF	20.00%	50V
C4336	1-126-967-11	ELECT	47UF	20.00%	50V
C4338	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4339	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C4340	1-126-933-11	ELECT	100UF	20.00%	16V
C4341	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C4342	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C4343	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4344	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C4345	1-126-967-11	ELECT	47UF	20.00%	50V
C4346	1-164-346-11	CERAMIC CHIP	1UF		16V
C4348	1-164-346-11	CERAMIC CHIP	1UF		16V
C4349	1-164-346-11	CERAMIC CHIP	1UF		16V
C4350	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4351	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C4352	1-126-967-11	ELECT	47UF	20.00%	50V
C4353	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C4354	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C4355	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4356	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4357	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4358	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4359	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C4360	1-126-963-11	ELECT	4.7UF	20.00%	50V
C4362	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4363	1-126-967-11	ELECT	47UF	20.00%	50V
C4364	1-126-967-11	ELECT	47UF	20.00%	50V
C4366	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C4367	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C4369	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4370	1-126-967-11	ELECT	47UF	20.00%	50V
C4371	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4378	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C8300	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8301	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8302	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8303	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8304	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8305	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8306	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V

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REF NO.	PART NO.	DESCRIPTION		REMARK	
C8307	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8308	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8309	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8310	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8311	1-164-346-11	CERAMIC CHIP	1UF		16V
C8312	1-164-346-11	CERAMIC CHIP	1UF		16V
C8313	1-164-346-11	CERAMIC CHIP	1UF		16V
C8314	1-164-346-11	CERAMIC CHIP	1UF		16V
C8317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8318	1-164-346-11	CERAMIC CHIP	1UF		16V
C8319	1-164-346-11	CERAMIC CHIP	1UF		16V
C8320	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8321	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8322	1-164-346-11	CERAMIC CHIP	1UF		16V
C8323	1-164-346-11	CERAMIC CHIP	1UF		16V
C8324	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8325	1-126-935-11	ELECT	470UF	20.00%	16V
C8326	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8330	1-164-346-11	CERAMIC CHIP	1UF		16V
C8331	1-164-346-11	CERAMIC CHIP	1UF		16V
C8336	1-126-947-11	ELECT	47UF	20.00%	16V
C8337	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8338	1-164-346-11	CERAMIC CHIP	1UF		16V
C8339	1-164-346-11	CERAMIC CHIP	1UF		16V
C8340	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8341	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8342	1-126-964-11	ELECT	10UF	20.00%	50V
C8343	1-126-947-11	ELECT	47UF	20.00%	16V
C8346	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8349	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8354	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8355	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8356	1-164-346-11	CERAMIC CHIP	1UF		16V
C8357	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8358	1-164-346-11	CERAMIC CHIP	1UF		16V
C8359	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C8361	1-126-961-11	ELECT	2.2UF	20.00%	50V
C8366	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8367	1-126-947-11	ELECT	47UF	20.00%	16V
C8368	1-126-947-11	ELECT	47UF	20.00%	16V
C8369	1-126-947-11	ELECT	47UF	20.00%	16V
C8370	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8371	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8372	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8373	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C8375	1-126-964-11	ELECT	10UF	20.00%	50V
C8376	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8377	1-164-346-11	CERAMIC CHIP	1UF		16V
C8378	1-164-346-11	CERAMIC CHIP	1UF		16V
C8379	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8380	1-164-346-11	CERAMIC CHIP	1UF		16V
C8381	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8382	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8383	1-164-346-11	CERAMIC CHIP	1UF		16V
C8384	1-164-346-11	CERAMIC CHIP	1UF		16V
C8385	1-164-346-11	CERAMIC CHIP	1UF		16V
C8386	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8390	1-126-963-11	ELECT	4.7UF	20.00%	50V
C8391	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8392	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V

REF NO.	PART NO.	DESCRIPTION		REMARK	
C8393	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8411	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8413	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8430	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8431	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C8432	1-163-239-11	CERAMIC CHIP	33PF	5.00%	50V
C8441	1-164-346-11	CERAMIC CHIP	1UF		16V
C8446	1-126-947-11	ELECT	47UF	20.00%	16V
C8447	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8448	1-164-690-91	CERAMIC CHIP	0.0022UF	5.00%	50V
C8450	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8451	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C8452	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8453	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8454	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8455	1-126-947-11	ELECT	47UF	20.00%	16V
C8456	1-126-947-11	ELECT	47UF	20.00%	16V
C8457	1-126-947-11	ELECT	47UF	20.00%	16V
C8459	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8462	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V

<CONNECTOR>

CN1100	*	1-785-608-11	PIN, CONNECTOR 4P
CN1108		1-793-494-11	CONNECTOR, BOARD TO BOARD 40P
CN1114	*	1-564-507-11	PLUG, CONNECTOR 4P
CN1116		1-695-915-11	TAB (CONTACT)
CN1118		1-793-493-11	CONNECTOR, BOARD TO BOARD 20P
CN1190	*	1-764-333-11	PLUG, CONNECTOR 10P
CN1193	*	1-764-333-11	PLUG, CONNECTOR 10P
CN2600		1-695-915-11	TAB (CONTACT)
CN4500	*	1-764-333-11	PLUG, CONNECTOR 10P
CN8301	*	1-764-333-11	PLUG, CONNECTOR 10P
CN8302	*	1-564-511-11	PLUG, CONNECTOR 8P

<DIODE>

D001	8-719-081-97	MMDL914T1
D002	8-719-081-97	MMDL914T1
D003	8-719-081-97	MMDL914T1
D004	8-719-081-97	MMDL914T1
D005	8-719-081-97	MMDL914T1
D006	8-719-081-97	MMDL914T1
D007	8-719-158-18	RD5.6SB3
D013	8-719-158-18	RD5.6SB3
D100	8-719-081-97	MMDL914T1
D300	1-216-295-91	SHORT 0
D301	8-719-081-97	MMDL914T1
D302	8-719-081-97	MMDL914T1
D317	8-719-081-97	MMDL914T1
D1200	8-719-083-52	UDZS-TE17-16B
D1201	8-719-081-97	MMDL914T1
D1203	8-719-081-97	MMDL914T1
D1204	8-719-081-97	MMDL914T1
D1216	8-719-081-97	MMDL914T1
D2200	8-719-158-35	RD9.1S-B
D2201	8-719-158-35	RD9.1S-B
D4303	8-719-109-72	RD3.9ES-B2
D4304	8-719-977-22	DTZ9.1
D4305	8-719-977-22	DTZ9.1
D4306	8-719-081-97	MMDL914T1
D4311	8-719-914-43	DAN202K

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REF NO.	PART NO.	DESCRIPTION	REMARK
D4312	8-719-914-43	DAN202K	
D4313	8-719-401-63	MA3062M-TX	
D4314	8-719-081-97	MMDL914T1	
D8301	8-719-158-35	RD9.1S-B	
D8302	8-719-158-35	RD9.1S-B	
D8303	8-719-158-35	RD9.1S-B	
D8304	8-719-158-35	RD9.1S-B	
D8305	8-719-158-35	RD9.1S-B	
D8306	8-719-158-35	RD9.1S-B	
D8307	8-719-158-35	RD9.1S-B	
D8308	8-719-158-35	RD9.1S-B	
D8309	8-719-158-35	RD9.1S-B	
D8310	8-719-158-35	RD9.1S-B	
D8311	8-719-158-35	RD9.1S-B	
D8312	8-719-158-35	RD9.1S-B	
D8313	8-719-158-35	RD9.1S-B	
D8314	8-719-158-35	RD9.1S-B	
D8315	8-719-158-35	RD9.1S-B	
D8316	8-719-158-35	RD9.1S-B	
D8320	8-719-158-35	RD9.1S-B	
D8321	8-719-158-35	RD9.1S-B	
D8322	8-719-158-35	RD9.1S-B	
D8323	8-719-158-35	RD9.1S-B	
D8324	8-719-158-35	RD9.1S-B	
D8325	8-719-158-35	RD9.1S-B	
D8331	8-719-041-97	MA113-(TX)	
		<FERRITE BEAD>	
FB002	1-414-233-22	FERRITE 0UH	
FB003	1-414-233-22	FERRITE 0UH	
FB004	1-414-233-22	FERRITE 0UH	
FB005	1-414-233-22	FERRITE 0UH	
FB006	1-414-233-22	FERRITE 0UH	
FB008	1-414-233-22	FERRITE 0UH	
FB1300	1-216-295-91	SHORT 0	
FB2300	1-410-397-21	FERRITE 1.1UH	
FB4387	1-216-295-91	SHORT 0	
FB4388	1-216-295-91	SHORT 0	
FB4389	1-216-295-91	SHORT 0	
		<FILTER>	
FL001	1-236-071-11	ENCAPSULATED COMPONENT	
FL8301	1-236-071-11	ENCAPSULATED COMPONENT	
FL8303	1-236-071-11	ENCAPSULATED COMPONENT	
FL8304	1-236-071-11	ENCAPSULATED COMPONENT	
FL8305	1-236-071-11	ENCAPSULATED COMPONENT	
FL8311	1-236-071-11	ENCAPSULATED COMPONENT	
		<IC>	
IC001	8-752-920-70	CXP750096-034Q	
IC002	8-759-663-29	MM1476AF(TP)	
IC003	8-759-699-33	M24C16-MN6T(A)	
IC100	8-759-042-02	S-80743AL-A7-S	
IC1200	8-759-100-96	UPC4558G2	
IC1201	8-759-690-57	BH3868BFS-E2	
IC1203	8-759-100-96	UPC4558G2	
IC1204	6-700-540-01	IC AN7582Z	
IC1205	8-759-711-10	NJU4066BM	
IC1206	8-759-689-71	NJM2188M-TE2	
IC2200	8-759-745-64	NJM4560M	
IC2300	8-759-666-90	IC TDA9181T	
IC2600	8-759-095-63	PQ09RF2	
IC2601	8-759-065-07	PQ05RF2	
IC2603	8-759-445-59	BA033T	
IC4301	8-752-090-87	CXA2100AQ	
IC8302	8-752-080-04	CXA2069Q	
IC8306	8-752-096-06	CXA2163Q-T6	
IC8309	8-759-337-26	MM1115XFBE	
IC8310	8-759-572-04	TDA9178T/N1.118	
IC8312	8-759-485-79	TC7SET08FU(TE85L	
		<JACK>	
J8301	1-784-646-11	TERMINAL, S	
J8302	1-778-387-11	JACK BLOCK, PIN 12P	
		<CHIP CONDUCTOR>	
JR001	1-216-295-91	SHORT 0	
JR102	1-216-295-91	SHORT 0	
JR107	1-216-295-91	SHORT 0	
JR1214	1-216-295-91	SHORT 0	
JR1219	1-216-295-91	SHORT 0	
JR4301	1-216-295-91	SHORT 0	
JR4302	1-216-295-91	SHORT 0	
JR4303	1-216-295-91	SHORT 0	
		<COIL>	
L001	1-414-856-11	INDUCTOR 10UH	
L002	1-414-856-11	INDUCTOR 10UH	
L003	1-414-751-11	INDUCTOR 1UH	
L005	1-414-856-11	INDUCTOR 10UH	
L006	1-412-525-31	INDUCTOR 10UH	
L101	1-414-856-11	INDUCTOR 10UH	
L102	1-414-856-11	INDUCTOR 10UH	
L103	1-414-856-11	INDUCTOR 10UH	
L104	1-414-856-11	INDUCTOR 10UH	
L105	1-414-856-11	INDUCTOR 10UH	
L1200	1-414-856-11	INDUCTOR 10UH	
L1201	1-414-856-11	INDUCTOR 10UH	
L1300	1-414-856-11	INDUCTOR 10UH	
L2300	1-414-856-11	INDUCTOR 10UH	
L4301	1-412-029-11	INDUCTOR 10UH	
L4302	1-412-029-11	INDUCTOR 10UH	
L4303	1-412-030-11	INDUCTOR 22UH	
L4304	1-412-029-11	INDUCTOR 10UH	
L4305	1-412-029-11	INDUCTOR 10UH	
L4306	1-412-029-11	INDUCTOR 10UH	
L4308	1-412-031-11	INDUCTOR 47UH	
L4309	1-412-031-11	INDUCTOR 47UH	
L4311	1-412-002-31	INDUCTOR 4.7UH	
L8302	1-414-196-41	INDUCTOR 47UH	
L8303	1-414-196-41	INDUCTOR 47UH	
L8304	1-414-196-41	INDUCTOR 47UH	

A

REF NO.	PART NO.	DESCRIPTION	REMARK
		<IC LINK>	
PS1201	1-533-597-41	LINK, IC	
		<TRANSISTOR>	
Q001	8-729-026-49	2SA1037AK-T146-R	
Q002	8-729-230-49	2SC2712-YG	
Q003	8-729-230-49	2SC2712-YG	
Q004	8-729-230-49	2SC2712-YG	
Q101	8-729-026-49	2SA1037AK-T146-R	
Q301	8-729-026-49	2SA1037AK-T146-R	
Q313	8-729-230-49	2SC2712-YG	
Q1203	8-729-027-44	DTC114TKA-T146	
Q1207	8-729-216-22	2SA1162-G	
Q1208	8-729-027-44	DTC114TKA-T146	
Q1210	8-729-027-44	DTC114TKA-T146	
Q2200	8-729-027-56	DTC143TKA-T146	
Q2201	8-729-027-56	DTC143TKA-T146	
Q2304	8-729-421-19	UN2213	
Q2305	8-729-230-49	2SC2712-YG	
Q2306	8-729-216-22	2SA1162-G	
Q4300	8-729-422-33	2SD601A-Q-TX	
Q4301	8-729-230-49	2SC2712-YG	
Q4302	8-729-424-02	2SB709A-QRS-TX	
Q4303	8-729-120-28	2SC1623-L5L6	
Q4304	8-729-230-49	2SC2712-YG	
Q4307	8-729-424-02	2SB709A-QRS-TX	
Q4308	8-729-424-02	2SB709A-QRS-TX	
Q4310	8-729-424-02	2SB709A-QRS-TX	
Q4311	8-729-424-02	2SB709A-QRS-TX	
Q4312	8-729-424-02	2SB709A-QRS-TX	
Q4313	8-729-422-33	2SD601A-Q-TX	
Q4314	8-729-424-02	2SB709A-QRS-TX	
Q4315	1-801-806-11	TR DTC144EKA	
Q4316	8-729-230-49	2SC2712-YG	
Q4317	8-729-900-53	DTC114EK	
Q4319	8-729-424-02	2SB709A-QRS-TX	
Q8301	8-729-026-49	2SA1037AK-T146-R	
Q8302	8-729-230-49	2SC2712-YG	
Q8303	8-729-230-49	2SC2712-YG	
Q8304	8-729-230-49	2SC2712-YG	
Q8306	8-729-230-49	2SC2712-YG	
Q8310	8-729-230-49	2SC2712-YG	
Q8319	8-729-026-49	2SA1037AK-T146-R	
Q8320	8-729-026-49	2SA1037AK-T146-R	
Q8321	8-729-026-49	2SA1037AK-T146-R	
Q8326	8-729-230-49	2SC2712-YG	
Q8327	1-801-806-11	TR DTC144EKA	
Q8328	1-801-806-11	TR DTC144EKA	
Q8329	8-729-230-49	2SC2712-YG	
Q8330	8-729-230-49	2SC2712-YG	
Q8331	8-729-230-49	2SC2712-YG	
Q8332	8-729-230-49	2SC2712-YG	
Q8333	8-729-230-49	2SC2712-YG	
Q8334	8-729-230-49	2SC2712-YG	
Q8335	8-729-230-49	2SC2712-YG	
Q8336	8-729-230-49	2SC2712-YG	
Q8337	8-729-230-49	2SC2712-YG	
Q8344	8-729-026-49	2SA1037AK-T146-R	
Q8351	8-729-230-49	2SC2712-YG	
Q8352	8-729-026-49	2SA1037AK-T146-R	
Q8358	1-801-806-11	TR DTC144EKA	
Q8359	1-801-806-11	TR DTC144EKA	
Q8360	1-801-806-11	TR DTC144EKA	
Q8361	8-729-230-49	2SC2712-YG	
Q8362	8-729-230-49	2SC2712-YG	
Q8363	8-729-230-49	2SC2712-YG	
Q8364	8-729-026-49	2SA1037AK-T146-R	

REF NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R001	1-216-033-00	RES-CHIP	220	5%	1/10W
R002	1-216-033-00	RES-CHIP	220	5%	1/10W
R004	1-216-295-91	SHORT	0		
R005	1-216-295-91	SHORT	0		
R006	1-216-029-00	RES-CHIP	150	5%	1/10W
R008	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R010	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R011	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R012	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R013	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R014	1-216-025-11	RES-CHIP	100	5%	1/10W
R015	1-216-025-11	RES-CHIP	100	5%	1/10W
R016	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R017	1-216-049-11	RES-CHIP	1K	5%	1/10W
R018	1-216-045-00	RES-CHIP	680	5%	1/10W
R019	1-216-049-11	RES-CHIP	1K	5%	1/10W
R020	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R021	1-216-295-91	SHORT	0		
R022	1-216-033-00	RES-CHIP	220	5%	1/10W
R023	1-216-025-11	RES-CHIP	100	5%	1/10W
R024	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R025	1-216-049-11	RES-CHIP	1K	5%	1/10W
R026	1-216-049-11	RES-CHIP	1K	5%	1/10W
R027	1-216-049-11	RES-CHIP	1K	5%	1/10W
R028	1-216-049-11	RES-CHIP	1K	5%	1/10W
R029	1-216-049-11	RES-CHIP	1K	5%	1/10W
R031	1-216-033-00	RES-CHIP	220	5%	1/10W
R032	1-216-049-11	RES-CHIP	1K	5%	1/10W
R033	1-216-033-00	RES-CHIP	220	5%	1/10W
R035	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R036	1-216-033-00	RES-CHIP	220	5%	1/10W
R037	1-216-033-00	RES-CHIP	220	5%	1/10W
R038	1-216-045-00	RES-CHIP	680	5%	1/10W
R039	1-216-025-11	RES-CHIP	100	5%	1/10W
R040	1-216-033-00	RES-CHIP	220	5%	1/10W
R041	1-216-025-11	RES-CHIP	100	5%	1/10W
R042	1-216-295-91	SHORT	0		
R043	1-216-025-11	RES-CHIP	100	5%	1/10W
R044	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R046	1-216-033-00	RES-CHIP	220	5%	1/10W
R047	1-216-033-00	RES-CHIP	220	5%	1/10W
R048	1-216-073-91	RES-CHIP	10K	5%	1/10W
R051	1-216-049-11	RES-CHIP	1K	5%	1/10W
R052	1-216-049-11	RES-CHIP	1K	5%	1/10W
R053	1-216-049-11	RES-CHIP	1K	5%	1/10W
R054	1-216-049-11	RES-CHIP	1K	5%	1/10W
R055	1-216-295-91	SHORT	0		
R058	1-216-295-91	SHORT	0		
R065	1-216-045-00	RES-CHIP	680	5%	1/10W

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R066	1-216-049-11	RES-CHIP	1K	5%	1/10W
R068	1-216-073-91	RES-CHIP	10K	5%	1/10W
R069	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R070	1-216-033-00	RES-CHIP	220	5%	1/10W
R071	1-216-025-11	RES-CHIP	100	5%	1/10W
R072	1-216-025-11	RES-CHIP	100	5%	1/10W
R073	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R074	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R075	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R076	1-216-295-91	SHORT	0		
R077	1-216-025-11	RES-CHIP	100	5%	1/10W
R078	1-216-295-91	SHORT	0		
R079	1-216-025-11	RES-CHIP	100	5%	1/10W
R080	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R081	1-216-025-11	RES-CHIP	100	5%	1/10W
R082	1-216-041-00	RES-CHIP	470	5%	1/10W
R083	1-216-049-11	RES-CHIP	1K	5%	1/10W
R084	1-216-049-11	RES-CHIP	1K	5%	1/10W
R085	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R086	1-216-073-91	RES-CHIP	10K	5%	1/10W
R087	1-216-033-00	RES-CHIP	220	5%	1/10W
R093	1-216-073-91	RES-CHIP	10K	5%	1/10W
R094	1-216-073-91	RES-CHIP	10K	5%	1/10W
R101	1-216-025-11	RES-CHIP	100	5%	1/10W
R102	1-216-025-11	RES-CHIP	100	5%	1/10W
R105	1-216-295-91	SHORT	0		
R109	1-216-041-00	RES-CHIP	470	5%	1/10W
R110	1-216-043-91	RES-CHIP	560	5%	1/10W
R111	1-216-025-11	RES-CHIP	100	5%	1/10W
R112	1-216-025-11	RES-CHIP	100	5%	1/10W
R116	1-216-025-11	RES-CHIP	100	5%	1/10W
R117	1-216-025-11	RES-CHIP	100	5%	1/10W
R118	1-216-025-11	RES-CHIP	100	5%	1/10W
R119	1-216-017-91	RES-CHIP	47	5%	1/10W
R121	1-216-017-91	RES-CHIP	47	5%	1/10W
R123	1-216-025-11	RES-CHIP	100	5%	1/10W
R124	1-216-025-11	RES-CHIP	100	5%	1/10W
R301	1-216-113-00	RES-CHIP	470K	5%	1/10W
R302	1-216-089-91	RES-CHIP	47K	5%	1/10W
R303	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1200	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R1201	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R1202	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R1203	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1204	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1205	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1206	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1207	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R1210	1-216-095-00	RES-CHIP	82K	5%	1/10W
R1211	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1212	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1213	1-216-085-91	RES-CHIP	33K	5%	1/10W
R1214	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R1215	1-216-095-00	RES-CHIP	82K	5%	1/10W
R1216	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R1217	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1218	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1219	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1220	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1221	1-216-055-00	RES-CHIP	1.8K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R1222	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R1224	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1227	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R1228	1-249-405-11	CARBON	100	5%	1/4W
R1230	1-249-405-11	CARBON	100	5%	1/4W
R1231	1-216-295-91	SHORT	0		
R1232	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1236	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1238	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1239	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1253	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1254	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1256	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1257	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1258	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1259	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1263	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1265	1-249-397-11	CARBON	22	5%	1/4W
R1268	1-249-397-11	CARBON	22	5%	1/4W
R1288	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1289	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1290	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1291	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1292	1-216-085-91	RES-CHIP	33K	5%	1/10W
R1293	1-216-025-11	RES-CHIP	100	5%	1/10W
R1294	1-216-025-11	RES-CHIP	100	5%	1/10W
R2200	1-216-021-00	RES-CHIP	68	5%	1/10W
R2201	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2202	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2203	1-216-021-00	RES-CHIP	68	5%	1/10W
R2204	1-216-073-91	RES-CHIP	10K	5%	1/10W
R2205	1-216-097-11	RES-CHIP	100K	5%	1/10W
R2206	1-216-117-00	RES-CHIP	680K	5%	1/10W
R2207	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2208	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2209	1-216-117-00	RES-CHIP	680K	5%	1/10W
R2210	1-216-089-91	RES-CHIP	47K	5%	1/10W
R2211	1-216-097-11	RES-CHIP	100K	5%	1/10W
R2212	1-216-073-91	RES-CHIP	10K	5%	1/10W
R2213	1-216-089-91	RES-CHIP	47K	5%	1/10W
R2214	1-216-089-91	RES-CHIP	47K	5%	1/10W
R2215	1-216-089-91	RES-CHIP	47K	5%	1/10W
R2310	1-216-033-00	RES-CHIP	220	5%	1/10W
R2311	1-216-033-00	RES-CHIP	220	5%	1/10W
R2312	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2313	1-216-041-00	RES-CHIP	470	5%	1/10W
R2314	1-216-029-00	RES-CHIP	150	5%	1/10W
R2315	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2316	1-218-179-11	RES-CHIP	10M	5%	1/10W
R2605	1-216-371-00	METAL OXIDE	1.5	5%	2W
R4300	1-216-025-11	RES-CHIP	100	5%	1/10W
R4301	1-216-025-11	RES-CHIP	100	5%	1/10W
R4302	1-216-025-11	RES-CHIP	100	5%	1/10W
R4303	1-216-025-11	RES-CHIP	100	5%	1/10W
R4304	1-216-025-11	RES-CHIP	100	5%	1/10W
R4305	1-216-025-11	RES-CHIP	100	5%	1/10W
R4308	1-216-295-91	SHORT	0		
R4310	1-216-295-91	SHORT	0		
R4312	1-216-295-91	SHORT	0		
R4313	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R4314	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4316	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R4317	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4318	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R4319	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R4320	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4321	1-216-298-00	RES-CHIP	2.2	5%	1/10W
R4323	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4324	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R4325	1-208-818-11	METAL CHIP	33K	0.5%	1/10W
R4326	1-208-826-11	METAL CHIP	68K	0.5%	1/10W
R4327	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4329	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R4330	1-216-089-91	RES-CHIP	47K	5%	1/10W
R4335	1-216-025-11	RES-CHIP	100	5%	1/10W
R4336	1-216-025-11	RES-CHIP	100	5%	1/10W
R4337	1-216-025-11	RES-CHIP	100	5%	1/10W
R4338	1-216-041-00	RES-CHIP	470	5%	1/10W
R4339	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R4341	1-216-295-91	SHORT	0		
R4343	1-216-025-11	RES-CHIP	100	5%	1/10W
R4344	1-216-025-11	RES-CHIP	100	5%	1/10W
R4345	1-216-075-00	RES-CHIP	12K	5%	1/10W
R4346	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R4347	1-216-025-11	RES-CHIP	100	5%	1/10W
R4348	1-216-025-11	RES-CHIP	100	5%	1/10W
R4349	1-216-041-00	RES-CHIP	470	5%	1/10W
R4350	1-216-025-11	RES-CHIP	100	5%	1/10W
R4351	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4352	1-216-041-00	RES-CHIP	470	5%	1/10W
R4353	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R4354	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4357	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4358	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R4359	1-216-043-91	RES-CHIP	560	5%	1/10W
R4360	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4361	1-216-133-91	RES-CHIP	3.3M	5%	1/10W
R4363	1-216-025-11	RES-CHIP	100	5%	1/10W
R4365	1-216-025-11	RES-CHIP	100	5%	1/10W
R4366	1-216-025-11	RES-CHIP	100	5%	1/10W
R4367	1-216-025-11	RES-CHIP	100	5%	1/10W
R4369	1-216-025-11	RES-CHIP	100	5%	1/10W
R4370	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4372	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4373	1-216-295-91	SHORT	0		
R4374	1-216-025-11	RES-CHIP	100	5%	1/10W
R4375	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4376	1-216-025-11	RES-CHIP	100	5%	1/10W
R4377	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4380	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4381	1-208-851-11	METAL CHIP	750K	0.5%	1/10W
R4382	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4383	1-208-825-11	METAL CHIP	62K	0.5%	1/10W
R4384	1-216-025-11	RES-CHIP	100	5%	1/10W
R4385	1-216-295-91	SHORT	0		
R4387	1-216-295-91	SHORT	0		
R4388	1-216-295-91	SHORT	0		
R4389	1-216-295-91	SHORT	0		
R4390	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4391	1-216-057-00	RES-CHIP	2.2K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R4392	1-216-089-91	RES-CHIP	47K	5%	1/10W
R4395	1-216-295-91	SHORT	0		
R4396	1-216-295-91	SHORT	0		
R4397	1-216-295-91	SHORT	0		
R4399	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4401	1-216-105-91	RES-CHIP	220K	5%	1/10W
R4408	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4409	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4411	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R4412	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4413	1-208-824-11	METAL CHIP	56K	0.5%	1/10W
R4504	1-216-295-91	SHORT	0		
R4505	1-216-295-91	SHORT	0		
R4506	1-216-295-91	SHORT	0		
R4518	1-216-025-11	RES-CHIP	100	5%	1/10W
R4519	1-216-073-91	RES-CHIP	10K	5%	1/10W
R8300	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8301	1-216-041-00	RES-CHIP	470	5%	1/10W
R8302	1-216-041-00	RES-CHIP	470	5%	1/10W
R8303	1-216-021-00	RES-CHIP	68	5%	1/10W
R8304	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R8305	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8306	1-216-022-00	RES-CHIP	75	5%	1/10W
R8307	1-216-022-00	RES-CHIP	75	5%	1/10W
R8308	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8309	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8310	1-216-022-00	RES-CHIP	75	5%	1/10W
R8311	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8312	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8313	1-216-022-00	RES-CHIP	75	5%	1/10W
R8314	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8315	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8316	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8321	1-216-025-11	RES-CHIP	100	5%	1/10W
R8322	1-216-022-00	RES-CHIP	75	5%	1/10W
R8323	1-216-295-91	SHORT	0		
R8324	1-216-295-91	SHORT	0		
R8325	1-216-295-91	SHORT	0		
R8326	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8327	1-216-295-91	SHORT	0		
R8328	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8329	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8330	1-216-022-00	RES-CHIP	75	5%	1/10W
R8331	1-216-025-11	RES-CHIP	100	5%	1/10W
R8332	1-216-025-11	RES-CHIP	100	5%	1/10W
R8333	1-216-025-11	RES-CHIP	100	5%	1/10W
R8334	1-216-295-91	SHORT	0		
R8336	1-216-295-91	SHORT	0		
R8337	1-216-022-00	RES-CHIP	75	5%	1/10W
R8338	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8339	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8340	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8341	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8342	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8343	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8344	1-216-022-00	RES-CHIP	75	5%	1/10W
R8345	1-216-033-00	RES-CHIP	220	5%	1/10W
R8346	1-216-031-00	RES-CHIP	180	5%	1/10W
R8347	1-216-025-11	RES-CHIP	100	5%	1/10W
R8348	1-216-057-00	RES-CHIP	2.2K	5%	1/10W

A

REF NO.	PART NO.	DESCRIPTION		REMARK	
R8349	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8350	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8351	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8352	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8353	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8354	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8355	1-216-295-91	SHORT	0		
R8356	1-216-295-91	SHORT	0		
R8357	1-216-017-91	RES-CHIP	47	5%	1/10W
R8358	1-216-017-91	RES-CHIP	47	5%	1/10W
R8361	1-216-017-91	RES-CHIP	47	5%	1/10W
R8364	1-216-041-00	RES-CHIP	470	5%	1/10W
R8365	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8366	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8367	1-216-041-00	RES-CHIP	470	5%	1/10W
R8370	1-216-025-11	RES-CHIP	100	5%	1/10W
R8372	1-216-295-91	SHORT	0		
R8373	1-216-295-91	SHORT	0		
R8376	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8377	1-216-025-11	RES-CHIP	100	5%	1/10W
R8378	1-216-033-00	RES-CHIP	220	5%	1/10W
R8379	1-216-033-00	RES-CHIP	220	5%	1/10W
R8380	1-216-025-11	RES-CHIP	100	5%	1/10W
R8381	1-216-025-11	RES-CHIP	100	5%	1/10W
R8382	1-216-033-00	RES-CHIP	220	5%	1/10W
R8383	1-216-033-00	RES-CHIP	220	5%	1/10W
R8384	1-216-025-11	RES-CHIP	100	5%	1/10W
R8388	1-216-031-00	RES-CHIP	180	5%	1/10W
R8389	1-216-033-00	RES-CHIP	220	5%	1/10W
R8395	1-216-033-00	RES-CHIP	220	5%	1/10W
R8396	1-216-033-00	RES-CHIP	220	5%	1/10W
R8399	1-216-025-11	RES-CHIP	100	5%	1/10W
R8400	1-216-025-11	RES-CHIP	100	5%	1/10W
R8411	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8414	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R8415	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8417	1-216-025-11	RES-CHIP	100	5%	1/10W
R8418	1-216-025-11	RES-CHIP	100	5%	1/10W
R8419	1-216-017-91	RES-CHIP	47	5%	1/10W
R8420	1-216-017-91	RES-CHIP	47	5%	1/10W
R8435	1-216-295-91	SHORT	0		
R8441	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8442	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8446	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8447	1-216-025-11	RES-CHIP	100	5%	1/10W
R8448	1-216-025-11	RES-CHIP	100	5%	1/10W
R8449	1-216-025-11	RES-CHIP	100	5%	1/10W
R8450	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8451	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8452	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8453	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8454	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8455	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8464	1-216-025-11	RES-CHIP	100	5%	1/10W
R8465	1-216-025-11	RES-CHIP	100	5%	1/10W
R8466	1-216-025-11	RES-CHIP	100	5%	1/10W
R8467	1-216-041-00	RES-CHIP	470	5%	1/10W
R8468	1-216-041-00	RES-CHIP	470	5%	1/10W
R8469	1-216-041-00	RES-CHIP	470	5%	1/10W
R8470	1-216-069-00	RES-CHIP	6.8K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R8471	1-216-025-11	RES-CHIP	100	5%	1/10W
R8478	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8479	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8480	1-216-073-91	RES-CHIP	10K	5%	1/10W
R8481	1-216-095-00	RES-CHIP	82K	5%	1/10W
R8482	1-216-089-91	RES-CHIP	47K	5%	1/10W
R8484	1-216-045-00	RES-CHIP	680	5%	1/10W
R8485	1-216-037-00	RES-CHIP	330	5%	1/10W
R8486	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8487	1-216-045-00	RES-CHIP	680	5%	1/10W
R8488	1-216-041-00	RES-CHIP	470	5%	1/10W
R8489	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8490	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8491	1-216-025-11	RES-CHIP	100	5%	1/10W
R8492	1-216-041-00	RES-CHIP	470	5%	1/10W
R8493	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8494	1-216-041-00	RES-CHIP	470	5%	1/10W
R8495	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8496	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8497	1-216-025-11	RES-CHIP	100	5%	1/10W
R8498	1-216-043-91	RES-CHIP	560	5%	1/10W
R8499	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8500	1-216-033-00	RES-CHIP	220	5%	1/10W
R8501	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8502	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8507	1-216-025-11	RES-CHIP	100	5%	1/10W
R8508	1-216-025-11	RES-CHIP	100	5%	1/10W
R8513	1-216-039-00	RES-CHIP	390	5%	1/10W
R8514	1-216-039-00	RES-CHIP	390	5%	1/10W
R8515	1-216-295-91	SHORT	0		
R8516	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8518	1-216-047-91	RES-CHIP	820	5%	1/10W
R8519	1-216-047-91	RES-CHIP	820	5%	1/10W
R8536	1-216-025-11	RES-CHIP	100	5%	1/10W
R8538	1-216-041-00	RES-CHIP	470	5%	1/10W
R8540	1-216-041-00	RES-CHIP	470	5%	1/10W
R8541	1-216-039-00	RES-CHIP	390	5%	1/10W
R8551	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8576	1-216-013-00	RES-CHIP	33	5%	1/10W
R8577	1-216-295-91	SHORT	0		
R8578	1-216-033-00	RES-CHIP	220	5%	1/10W
R8579	1-216-295-91	SHORT	0		
R8582	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8583	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8584	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8593	1-216-025-11	RES-CHIP	100	5%	1/10W

<TUNER>

TU101	8-598-451-00	TUNER, FSS BTF-WG441

<CRYSTAL>

X001	1-567-928-11	VIBLATOR, CERAMIC
X4300	1-767-127-11	VIBRATOR, CERAMIC
X8301	1-781-612-11	VIBRATOR, CRYSTAL

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B3

REF NO.	PART NO.	DESCRIPTION			REMARK
*	A-1136-132-A	B3 BOARD COMPLETE			
		**********			
		<CAPACITOR>			
C501	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C502	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C503	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C505	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C507	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C511	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C512	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C514	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C515	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C516	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C517	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C518	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C519	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C520	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C521	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C522	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C523	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C524	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C525	1-126-394-11	ELECT CHIP	10UF	20.00%	16V
C526	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C527	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C528	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C539	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C540	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C543	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C545	1-126-396-11	ELECT CHIP	47UF	20.00%	16V
C546	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C548	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C549	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C550	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C551	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C554	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C555	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C556	1-126-396-11	ELECT CHIP	47UF	20.00%	16V
C557	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C559	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C560	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C601	1-126-394-11	ELECT CHIP	10UF	20.00%	16V
C602	1-126-394-11	ELECT CHIP	10UF	20.00%	16V
C603	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C604	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C605	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C606	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C607	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C608	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C609	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C610	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C611	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C612	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C613	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C614	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C615	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C616	1-126-396-11	ELECT CHIP	47UF	20.00%	16V
C617	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C618	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C619	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C620	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C621	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C622	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C623	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C624	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C625	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C626	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C627	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C628	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C629	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C630	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C631	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C632	1-126-206-11	ELECT CHIP	100UF	20.00%	6.3V
C633	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C634	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C635	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C636	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C637	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C638	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C639	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C640	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C642	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C643	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C644	1-126-398-11	ELECT CHIP	4.7UF	20.00%	35V
C645	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
		<CONNECTOR>			
CN502	1-793-497-11	CONNECTOR, BOARD TO BOARD 40P			
		<DIODE>			
D501	8-719-056-77	UDZ-TE-17-3.9B			
D601	8-719-081-97	MMDL914T1			
		<FERRITE BEAD>			
FB501	1-414-813-11	FERRITE	0UH		
FB502	1-414-813-11	FERRITE	0UH		
FB503	1-414-813-11	FERRITE	0UH		
FB504	1-414-813-11	FERRITE	0UH		
FB601	1-414-553-11	FERRITE	0UH		
		<FILTER>			
FL501	1-233-877-11	FILTER, LOW PASS			
FL502	1-233-504-21	FILTER, LOW PASS			
FL503	1-233-504-21	FILTER, LOW PASS			
FL504	1-234-177-21	FILTER, CHIP EMI			
FL505	1-234-177-21	FILTER, CHIP EMI			
FL506	1-234-177-21	FILTER, CHIP EMI			
FL510	1-234-177-21	FILTER, CHIP EMI			
FL511	1-234-177-21	FILTER, CHIP EMI			
FL512	1-234-177-21	FILTER, CHIP EMI			
FL601	1-234-177-21	FILTER, CHIP EMI			
FL602	1-234-177-21	FILTER, CHIP EMI			
FL603	1-234-177-21	FILTER, CHIP EMI			
FL901	1-234-113-21	FILTER, LOW PASS			
FL902	1-234-112-21	FILTER, LOW PASS			
FL903	1-234-112-21	FILTER, LOW PASS			

B3

REF NO.	PART NO.	DESCRIPTION		REMARK	
		<IC>			
IC501	8-759-447-90	TLC5733AIPM			
IC504	8-759-669-78	TLC2933IPWR-12			
IC505	8-759-547-54	TC7SET00FU(TE85			
IC506	8-759-547-54	TC7SET00FU(TE85			
IC601	8-752-409-78	IC CXD2095AQ			
IC602	8-759-573-19	MSM56V16160D-10			
IC603	8-759-669-75	TLC2932IPWR			
IC604	8-752-072-94	CXA1875AM-T4			
IC605	8-749-015-18	PQ07VZ012ZP			
		<CHIP CONDUCTOR>			
JR602	1-216-295-91	SHORT	0		
		<COIL>			
L503	1-412-026-11	INDUCTOR	1UH		
L505	1-412-029-11	INDUCTOR	10UH		
L506	1-412-026-11	INDUCTOR	1UH		
L508	1-412-029-11	INDUCTOR	10UH		
L509	1-412-029-11	INDUCTOR	10UH		
L512	1-412-026-11	INDUCTOR	1UH		
L604	1-412-029-11	INDUCTOR	10UH		
L605	1-412-029-11	INDUCTOR	10UH		
		<TRANSISTOR>			
Q501	8-729-216-22	2SA1162-G			
Q502	8-729-120-28	2SC1623-L5L6			
Q503	8-729-120-28	2SC1623-L5L6			
Q516	8-729-120-28	2SC1623-L5L6			
Q517	8-729-120-28	2SC1623-L5L6			
Q518	8-729-216-22	2SA1162-G			
Q521	8-729-120-28	2SC1623-L5L6			
Q522	8-729-120-28	2SC1623-L5L6			
Q523	8-729-120-28	2SC1623-L5L6			
Q601	8-729-120-28	2SC1623-L5L6			
Q602	8-729-120-28	2SC1623-L5L6			
Q901	8-729-216-22	2SA1162-G			
Q902	8-729-216-22	2SA1162-G			
Q903	8-729-216-22	2SA1162-G			
Q907	8-729-216-22	2SA1162-G			
Q908	8-729-216-22	2SA1162-G			
Q909	8-729-216-22	2SA1162-G			
		<RESISTOR>			
R501	1-216-025-11	RES-CHIP	100	5%	1/10W
R502	1-216-025-11	RES-CHIP	100	5%	1/10W
R503	1-216-295-91	SHORT	0		
R504	1-216-295-91	SHORT	0		
R505	1-216-295-91	SHORT	0		
R506	1-216-025-11	RES-CHIP	100	5%	1/10W
R507	1-216-025-11	RES-CHIP	100	5%	1/10W
R513	1-216-043-91	RES-CHIP	560	5%	1/10W
R514	1-216-043-91	RES-CHIP	560	5%	1/10W
R515	1-216-043-91	RES-CHIP	560	5%	1/10W
R516	1-216-049-11	RES-CHIP	1K	5%	1/10W
R517	1-216-049-11	RES-CHIP	1K	5%	1/10W
R518	1-216-295-91	SHORT	0		

REF NO.	PART NO.	DESCRIPTION		REMARK	
R520	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R521	1-216-295-91	SHORT	0		
R523	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R524	1-216-295-91	SHORT	0		
R526	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R528	1-216-037-00	RES-CHIP	330	5%	1/10W
R529	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R530	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R531	1-216-031-00	RES-CHIP	180	5%	1/10W
R532	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R533	1-216-031-00	RES-CHIP	180	5%	1/10W
R537	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R548	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R549	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R550	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R551	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R552	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R553	1-216-295-91	SHORT	0		
R554	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R555	1-216-077-91	RES-CHIP	15K	5%	1/10W
R557	1-216-049-11	RES-CHIP	1K	5%	1/10W
R558	1-216-025-11	RES-CHIP	100	5%	1/10W
R559	1-216-077-91	RES-CHIP	15K	5%	1/10W
R560	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R561	1-216-043-91	RES-CHIP	560	5%	1/10W
R562	1-216-043-91	RES-CHIP	560	5%	1/10W
R563	1-216-043-91	RES-CHIP	560	5%	1/10W
R571	1-216-295-91	SHORT	0		
R572	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R573	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R574	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R575	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R576	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R577	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R578	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R579	1-216-077-91	RES-CHIP	15K	5%	1/10W
R580	1-216-295-91	SHORT	0		
R598	1-216-025-11	RES-CHIP	100	5%	1/10W
R600	1-216-066-00	RES-CHIP	5.1K	5%	1/10W
R601	1-216-073-91	RES-CHIP	10K	5%	1/10W
R602	1-216-073-91	RES-CHIP	10K	5%	1/10W
R603	1-216-073-91	RES-CHIP	10K	5%	1/10W
R604	1-216-033-00	RES-CHIP	220	5%	1/10W
R605	1-216-295-91	SHORT	0		
R608	1-216-295-91	SHORT	0		
R609	1-216-073-91	RES-CHIP	10K	5%	1/10W
R610	1-216-033-00	RES-CHIP	220	5%	1/10W
R611	1-216-073-91	RES-CHIP	10K	5%	1/10W
R612	1-216-073-91	RES-CHIP	10K	5%	1/10W
R613	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R614	1-216-295-91	SHORT	0		
R615	1-216-089-91	RES-CHIP	47K	5%	1/10W
R616	1-216-073-91	RES-CHIP	10K	5%	1/10W
R617	1-216-295-91	SHORT	0		
R619	1-216-073-91	RES-CHIP	10K	5%	1/10W
R621	1-216-295-91	SHORT	0		
R622	1-216-295-91	SHORT	0		
R623	1-216-295-91	SHORT	0		
R624	1-216-295-91	SHORT	0		
R626	1-216-073-91	RES-CHIP	10K	5%	1/10W
R628	1-216-295-91	SHORT	0		
R629	1-216-073-91	RES-CHIP	10K	5%	1/10W

B3 C

REF NO.	PART NO.	DESCRIPTION		REMARK	
R631	1-216-295-91	SHORT	0		
R634	1-216-295-91	SHORT	0		
R635	1-216-295-91	SHORT	0		
R638	1-216-295-91	SHORT	0		
R639	1-216-017-91	RES-CHIP	47	5%	1/10W
R640	1-216-009-91	RES-CHIP	22	5%	1/10W
R642	1-216-295-91	SHORT	0		
R643	1-216-295-91	SHORT	0		
R645	1-216-295-91	SHORT	0		
R647	1-216-295-91	SHORT	0		
R648	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R650	1-211-960-11	METAL CHIP	22	0.5%	1/10W
R651	1-216-295-91	SHORT	0		
R653	1-216-025-11	RES-CHIP	100	5%	1/10W
R654	1-216-033-00	RES-CHIP	220	5%	1/10W
R655	1-216-295-91	SHORT	0		
R657	1-216-009-91	RES-CHIP	22	5%	1/10W
R658	1-216-049-11	RES-CHIP	1K	5%	1/10W
R659	1-216-025-11	RES-CHIP	100	5%	1/10W
R660	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R664	1-216-295-91	SHORT	0		
R665	1-216-035-00	RES-CHIP	270	5%	1/10W
R666	1-216-646-11	METAL CHIP	620	0.5%	1/10W
R667	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R668	1-216-017-91	RES-CHIP	47	5%	1/10W
R670	1-216-295-91	SHORT	0		
R671	1-216-073-91	RES-CHIP	10K	5%	1/10W
R672	1-216-073-91	RES-CHIP	10K	5%	1/10W
R673	1-216-073-91	RES-CHIP	10K	5%	1/10W
R674	1-216-073-91	RES-CHIP	10K	5%	1/10W
R675	1-216-073-91	RES-CHIP	10K	5%	1/10W
R676	1-216-073-91	RES-CHIP	10K	5%	1/10W
R677	1-216-073-91	RES-CHIP	10K	5%	1/10W
R678	1-216-073-91	RES-CHIP	10K	5%	1/10W
R679	1-216-073-91	RES-CHIP	10K	5%	1/10W
R680	1-216-073-91	RES-CHIP	10K	5%	1/10W
R681	1-216-073-91	RES-CHIP	10K	5%	1/10W
R682	1-216-073-91	RES-CHIP	10K	5%	1/10W
R683	1-216-073-91	RES-CHIP	10K	5%	1/10W
R684	1-216-073-91	RES-CHIP	10K	5%	1/10W
R685	1-216-073-91	RES-CHIP	10K	5%	1/10W
R686	1-216-073-91	RES-CHIP	10K	5%	1/10W
R687	1-216-295-91	SHORT	0		
R688	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R689	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R690	1-216-295-91	SHORT	0		
R691	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R692	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R693	1-216-009-91	RES-CHIP	22	5%	1/10W
R694	1-216-295-91	SHORT	0		
R695	1-216-047-91	RES-CHIP	820	5%	1/10W
R696	1-216-049-11	RES-CHIP	1K	5%	1/10W
R697	1-216-117-00	RES-CHIP	680K	5%	1/10W
R698	1-216-117-00	RES-CHIP	680K	5%	1/10W
R699	1-216-295-91	SHORT	0		
R907	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R908	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R909	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R910	1-216-049-11	RES-CHIP	1K	5%	1/10W
R911	1-216-049-11	RES-CHIP	1K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R912	1-216-049-11	RES-CHIP	1K	5%	1/10W
R942	1-216-037-00	RES-CHIP	330	5%	1/10W
R943	1-216-033-00	RES-CHIP	220	5%	1/10W
R957	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R958	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R959	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R960	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R961	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R962	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R981	1-216-037-00	RES-CHIP	330	5%	1/10W
R982	1-216-037-00	RES-CHIP	330	5%	1/10W
R983	1-216-089-91	RES-CHIP	47K	5%	1/10W
R984	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R985	1-216-113-00	RES-CHIP	470K	5%	1/10W
R986	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R987	1-216-049-11	RES-CHIP	1K	5%	1/10W
R988	1-216-033-00	RES-CHIP	220	5%	1/10W
R989	1-216-081-00	RES-CHIP	22K	5%	1/10W
R990	1-216-113-00	RES-CHIP	470K	5%	1/10W
R991	1-216-295-91	SHORT	0		
R993	1-216-089-91	RES-CHIP	47K	5%	1/10W
RB019	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB020	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB021	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB022	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB023	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB024	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB025	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB026	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB027	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
**********					
*	A-1332-101-A	C BOARD MOUNTED			
		**********			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
		<CAPACITOR>			
C9002	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9003	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9004	1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C9005	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9006	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9007	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C9008	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C9009	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C9010	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9011	1-136-207-11	MYLAR	0.047UF	10.00%	250V
C9012	1-136-207-11	MYLAR	0.047UF	10.00%	250V
C9014	1-136-207-11	MYLAR	0.047UF	10.00%	250V
C9015	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9016	1-102-106-00	CERAMIC	100PF	10.00%	50V
C9018	1-107-961-91	ELECT	10UF	20.00%	250V
C9019	1-163-035-00	CERAMIC CHIP	0.047UF		50V
C9020	1-107-961-91	ELECT	10UF	20.00%	250V
C9021	1-107-961-91	ELECT	10UF	20.00%	250V
C9022	1-101-004-00	CERAMIC	0.01UF		50V
C9023	1-101-004-00	CERAMIC	0.01UF		50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

C

REF NO.		PART NO.	DESCRIPTION			REMARK
C9024		1-163-035-00	CERAMIC CHIP	0.047UF		50V
C9025		1-104-653-11	ELECT	220UF	20.00%	16V
C9026		1-163-035-00	CERAMIC CHIP	0.047UF		50V
C9027		1-101-004-00	CERAMIC	0.01UF		50V
C9028		1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C9029		1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C9030		1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C9031		1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C9032		1-162-116-00	CERAMIC	680PF	10.00%	2KV
C9033		1-107-662-11	ELECT	22UF	20.00%	250V
C9035		1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C9042		1-126-940-11	ELECT	330UF	20.00%	25V
C9047		1-107-651-11	ELECT	4.7UF	20.00%	250V
			<CONNECTOR>			
CN9001	*	1-564-512-11	PLUG, CONNECTOR 9P			
CN9002		1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
CN9003		1-695-915-11	TAB (CONTACT)			
CN9004		1-695-915-11	TAB (CONTACT)			
CN9007		1-785-879-11	CONNECTOR, ONE TOUCH			
			<DIODE>			
D9002		8-719-400-75	MA3091			
D9005		8-719-404-50	MA111-TX			
D9006		8-719-051-85	HSS83TD			
D9007		8-719-051-85	HSS83TD			
D9008		8-719-051-85	HSS83TD			
D9009		8-719-908-03	GP08D			
D9010		8-719-110-17	RD10ESB2			
D9011		1-216-295-91	SHORT	0		
D9012		1-216-295-91	SHORT	0		
D9013		1-216-295-91	SHORT	0		
			<IC>			
IC9001		8-759-360-83	TDA6111Q/N4			
IC9002		8-759-360-83	TDA6111Q/N4			
IC9003		8-759-360-83	TDA6111Q/N4			
			<JACK>			
J9001	⚠	1-540-071-22	SOCKET, CRT			
			<COIL>			
L9001		1-414-158-11	INDUCTOR	2.2UH		
L9002		1-414-179-21	INDUCTOR	2.2UH		
L9003		1-414-179-21	INDUCTOR	2.2UH		
L9004		1-414-179-21	INDUCTOR	2.2UH		
L9005		1-406-666-21	INDUCTOR	150UH		
L9006		1-412-526-11	INDUCTOR	12UH		
			<NEON LAMP>			
NL9001		1-519-526-11	LAMP, NEON			
NL9003		1-519-526-11	LAMP, NEON			

REF NO.	PART NO.	DESCRIPTION			REMARK
		<TRANSISTOR>			
Q9001	8-729-026-49	2SA1037AK-T146-R			
Q9009	8-729-026-49	2SA1037AK-T146-R			
Q9010	8-729-026-49	2SA1037AK-T146-R			
Q9011	8-729-026-49	2SA1037AK-T146-R			
		<RESISTOR>			
R9001	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R9006	1-216-073-91	RES-CHIP	10K	5%	1/10W
R9007	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R9008	1-216-085-91	RES-CHIP	33K	5%	1/10W
R9012	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9013	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9018	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R9019	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R9021	1-216-295-91	SHORT	0		
R9023	1-216-295-91	SHORT	0		
R9026	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R9031	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R9033	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R9034	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R9035	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R9036	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9037	1-240-233-71	METAL OXIDE	100	5%	3W
R9038	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R9039	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R9041	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9042	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9043	1-240-233-71	METAL OXIDE	100	5%	3W
R9044	1-240-233-71	METAL OXIDE	100	5%	3W
R9047	1-219-744-11	CARBON	220	5%	1/2W
R9048	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R9049	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R9050	1-249-424-11	CARBON	3.9K	5%	1/4W
R9051	1-219-744-11	CARBON	220	5%	1/2W
R9052	1-219-744-11	CARBON	220	5%	1/2W
R9053	1-249-424-11	CARBON	3.9K	5%	1/4W
R9054	1-249-424-11	CARBON	3.9K	5%	1/4W
R9055	1-243-994-91	CEMENTED	820K	5%	0.5W
R9056	1-219-750-91	CARBON	22K	5%	1/2W
R9057	1-220-827-91	RESISTOR	560K	5%	1/2W
R9058	1-243-994-91	CEMENTED	820K	5%	0.5W
R9059	1-219-746-11	CARBON	1K	5%	1/2W
R9061	1-219-743-11	CARBON	100	5%	1/2W
R9065	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R9068	1-216-101-00	RES-CHIP	150K	5%	1/10W
R9069	1-219-743-11	CARBON	100	5%	1/2W
R9070	1-216-037-00	RES-CHIP	330	5%	1/10W
R9071	1-216-037-00	RES-CHIP	330	5%	1/10W
R9072	1-216-037-00	RES-CHIP	330	5%	1/10W
R9073	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
		<VARIABLE RESISTOR>			
RV9001	1-241-656-11	RES, ADJ, METAL FILM 110M			
RV9002	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M			

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D

REF NO.		PART NO.	DESCRIPTION			REMARK
	*	A-1346-975-A	D BOARD COMPLETE			
			**********			
	*	4-363-146-00	HEAT SINK, V.OUT			
	*	4-374-846-01	COVER, CAPACITOR, CAP TYPE			
		4-382-854-11	SCREW (M3X10), P, SW (+)			
		4-382-854-21	SCREW (M3X14), P, SW (+)			
			<CAPACITOR>			
C6100		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6101		1-107-680-91	ELECT	22UF	20.00%	450V
C6102		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6103		1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C6104		1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C6105		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6106		1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C6107		1-137-605-11	MYLAR	0.01UF	10.00%	250V
C6108		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6109		1-126-971-11	ELECT	470UF	20.00%	50V
C6110		1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C6111		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6113		1-126-965-91	ELECT	22UF	20.00%	50V
C6334		1-126-940-11	ELECT	330UF	20.00%	25V
C6600		1-128-550-11	ELECT	2200UF	20.00%	50V
C6601		1-126-967-11	ELECT	47UF	20.00%	50V
C6602		1-129-720-00	FILM	0.033UF	5.00%	630V
C6603		1-126-949-11	ELECT	220UF	20.00%	35V
C6604		1-126-967-11	ELECT	47UF	20.00%	50V
C6606		1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6607	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C6608	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C6609		1-126-960-11	ELECT	1UF	20.00%	50V
C6610		1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6611		1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C6612		1-126-964-11	ELECT	10UF	20.00%	50V
C6613		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6614		1-161-830-00	CERAMIC	0.0047UF		500V
C6615		1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6616		1-126-961-11	ELECT	2.2UF	20.00%	50V
C6617		1-161-830-00	CERAMIC	0.0047UF		500V
C6618		1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6619		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6620		1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6621		1-131-940-11	ELECT	1200UF	20%	250V
C6622		1-131-940-11	ELECT	1200UF	20%	250V
C6624		1-126-962-11	ELECT	3.3UF	20.00%	50V
C6633		1-136-479-11	FILM	0.001UF	2.00%	50V
C6634		1-126-964-11	ELECT	10UF	20.00%	50V
C6635		1-126-963-11	ELECT	4.7UF	20.00%	50V
C6637		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6645		1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C6647		1-126-964-11	ELECT	10UF	20.00%	50V
C6648		1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6649		1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6650		1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6651		1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6652		1-110-626-11	ELECT	330UF	20.00%	160V
C6653		1-137-368-11	MYLAR	0.0047UF	5.00%	50V
C6654		1-126-936-11	ELECT	3300UF	20.00%	16V
C6655		1-126-936-11	ELECT	3300UF	20.00%	16V
C6656		1-136-165-00	FILM	0.1UF	5.00%	50V
C6658		1-104-330-91	CERAMIC	470PF	10.00%	1KV
C6660		1-126-960-11	ELECT	1UF	20.00%	50V
C6661		1-126-947-11	ELECT	47UF	20.00%	16V
C6662		1-126-947-11	ELECT	47UF	20.00%	16V
C6665		1-126-964-11	ELECT	10UF	20.00%	50V
C6666		1-137-150-11	MYLAR	0.01UF	5.00%	50V
C6668		1-126-947-11	ELECT	47UF	20.00%	25V
C6669		1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6670		1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6672		1-135-946-21	FILM	47000PF	3%	800V
C6673		1-136-189-00	MYLAR	0.1UF	10.00%	250V
C6674		1-128-527-11	ELECT	330UF	20.00%	25V
C6679		1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C6800		1-126-964-11	ELECT	10UF	20.00%	50V
C6801		1-126-960-11	ELECT	1UF	20.00%	50V
C6802		1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6805		1-111-087-11	ELECT	330UF	20.00%	25V
C6806		1-107-933-11	ELECT	100UF	20.00%	100V
C6808		1-137-401-11	MYLAR	0.22UF	10.00%	100V
C6809		1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C6810		1-106-220-00	MYLAR	0.1UF	10.00%	100V
C6811		1-111-087-11	ELECT	330UF	20.00%	25V
C6813		1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C6814		1-125-889-91	CERAMIC CHIP	2.2UF	10%	10V
C6815		1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C6816		1-136-060-00	FILM	0.047UF	5.00%	400V
C6817		1-126-967-11	ELECT	47UF	20.00%	50V
C6818		1-126-960-11	ELECT	1UF	20.00%	50V
C6819		1-126-960-11	ELECT	1UF	20.00%	50V
C6820		1-102-114-00	CERAMIC	470PF	10.00%	50V
C6821		1-106-383-00	MYLAR	0.047UF	10.00%	200V
C6822		1-102-114-00	CERAMIC	470PF	10.00%	50V
C6823		1-106-383-00	MYLAR	0.047UF	10.00%	200V
C6826		1-102-030-00	CERAMIC	330PF	10.00%	500V
C6827		1-102-030-00	CERAMIC	330PF	10.00%	500V
C6828		1-104-987-11	MYLAR	0.001UF	10.00%	200V
C6829		1-107-444-11	CERAMIC	100PF	10.00%	2KV
C6831		1-117-835-11	FILM	6200PF	3.00%	1.5KV
C6832		1-117-836-11	FILM	6800PF	3.00%	1.5KV
C6833		1-127-680-11	FILM MELF	4700PF	2%	100V
C6834		1-125-893-11	FILM	680PF	3.00%	1.5KV
C6835		1-125-893-11	FILM	680PF	3.00%	1.5KV
C6836		1-127-681-11	FILM MELF	10000PF	2%	100V
C6837		1-125-893-11	FILM	680PF	3.00%	1.5KV
C6838		1-125-893-11	FILM	680PF	3.00%	1.5KV
C6839		1-126-933-11	ELECT	100UF	20.00%	16V
C6840		1-126-933-11	ELECT	100UF	20.00%	16V
C6841		1-115-511-11	FILM	0.12UF	5.00%	250V
C6842		1-117-667-71	FILM	0.47UF	5.00%	250V
C6843		1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6844		1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6845		1-115-514-11	FILM	0.22UF	5.00%	250V
C6846		1-109-945-11	FILM	0.18UF	5.00%	250V
C6847		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6848		1-113-979-51	FILM	0.047UF	5%	250V
C6849		1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6850		1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6851		1-107-639-11	ELECT	47UF	20.00%	160V
C6853		1-102-228-00	CERAMIC	470PF	10.00%	500V
C6854		1-126-941-11	ELECT	470UF	20.00%	25V
C6855		1-123-024-21	ELECT	33UF		160V
C6856		1-126-971-11	ELECT	470UF	20.00%	50V
C6857		1-102-228-00	CERAMIC	470PF	10.00%	500V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION			REMARK
C6858	1-102-228-00	CERAMIC	470PF	10.00%	500V
C6859	1-162-129-00	CERAMIC	150PF	10.00%	2KV
C6860	1-162-131-11	CERAMIC	220PF	10.00%	2KV
C6862	1-130-202-00	FILM	0.022UF	5.00%	200V
C6863	1-107-906-11	ELECT	10UF	20.00%	50V
C6864	1-129-898-00	FILM	0.0022UF	5.00%	630V
C6865	1-130-202-00	FILM	0.022UF	5.00%	400V
C6866	1-102-030-00	CERAMIC	330PF	10.00%	500V
C6867	1-130-785-11	MYLAR	0.47UF	10.00%	100V
C6868	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6871	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C6872	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C6874	1-136-165-00	FILM	0.1UF	5.00%	50V
C6875	1-126-947-11	ELECT	47UF	20.00%	16V
C6876	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6877	1-126-964-11	ELECT	10UF	20.00%	50V
C6878	1-126-320-11	ELECT	10UF	20.00%	16V
C6879	1-107-960-11	ELECT	4.7UF	20.00%	160V
C6880	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6882	1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C6883	1-126-965-91	ELECT	22UF	20.00%	50V
C6884	1-125-889-91	CERAMIC CHIP	2.2UF	10%	10V
C6885	1-162-131-11	CERAMIC	220PF	10.00%	2KV

<CONNECTOR>

CN6602*⚠	1-508-786-13	PIN, CONNECTOR (5MM PITCH) 2P	
CN6603*⚠	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN6604	1-580-843-11	PIN, CONNECTOR (POWER)	
CN6605 *	1-764-333-11	PLUG, CONNECTOR 10P	
CN6606 *	1-764-333-11	PLUG, CONNECTOR 10P	
CN6609 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6610 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6611 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6612 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6613 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6614 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6615 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6616 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6617	1-695-915-11	TAB (CONTACT)	
CN6618 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6619	1-564-507-11	PLUG, CONNECTOR 4P	
CN6800 *	1-764-333-11	PLUG, CONNECTOR 10P	
CN6801*⚠	1-785-270-12	PIN, DY CONNECTOR (PC BOARD)	
CN6802	1-783-967-11	CONNECTOR, BOARD TO BOARD 30P	
CN6803 *	1-764-333-11	PLUG, CONNECTOR 10P	
CN6804⚠	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
CN6805	1-695-915-11	TAB (CONTACT)	
CN6808	1-695-915-11	TAB (CONTACT)	
CN6809	1-695-915-11	TAB (CONTACT)	
CN6810	1-785-879-11	CONNECTOR, ONE TOUCH	
CN6811 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6812 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6819	1-783-967-11	CONNECTOR, BOARD TO BOARD 30P	

<DIODE>

D6100	8-719-077-76	D2SB60A-F04
D6101	8-719-110-49	RD18ES-B2
D6102	8-719-083-83	DIODE UDZS-TE17-15B
D6103	8-719-404-50	MA111-TX
D6104	8-719-510-48	D1N20R
D6105	8-719-948-45	ERA22-08
D6108	8-719-063-73	DIODE D1NL20U-TR
D6323	8-719-032-12	D1NS6
D6601	8-719-911-19	1SS119-25
D6602	8-719-404-50	MA111-TX
D6603	8-719-404-50	MA111-TX
D6604	8-719-404-50	MA111-TX
D6605	8-719-510-53	D4SB60L
D6608	8-719-404-50	MA111-TX
D6609	8-719-911-19	1SS119-25
D6610	8-719-404-50	MA111-TX
D6611	8-719-404-50	MA111-TX
D6612	8-719-911-55	U05G
D6613	8-719-911-55	U05G
D6614	8-719-110-30	RD12ES-B1
D6615	8-719-911-19	1SS119-25
D6618	8-719-979-64	UF4005PKG23
D6620	8-719-063-73	DIODE D1NL20U-TR
D6623	8-719-911-19	1SS119-25
D6631	8-719-050-18	D4SBL20U
D6632	8-719-404-50	MA111-TX
D6633	8-719-510-12	D10SC4M
D6635	8-719-110-47	RD18ESB
D6636	8-719-911-19	1SS119-25
D6639	8-719-063-73	DIODE D1NL20U-TR
D6640	8-719-110-72	RD30ESB2
D6641	8-719-109-96	RD6.8ES-B1
D6642	8-719-911-19	1SS119-25
D6644	8-719-052-92	D10SBS4F
D6648	8-719-110-30	RD12ES-B1
D6654	8-719-052-92	D10SBS4F
D6800	8-719-110-03	RD7.5ESB2
D6801	8-719-911-19	1SS119-25
D6803	8-719-510-73	S3L20UF4
D6806	8-719-911-19	1SS119-25
D6807	8-719-109-68	RD3.6ES-B1
D6808	8-719-914-43	DAN202K
D6809	8-719-908-03	GP08D
D6812	8-719-110-39	RD15ES-B1
D6813	8-719-302-43	EL1Z
D6814	8-719-018-82	RGP02-20EL-6394
D6816	8-719-510-73	S3L20UF4
D6817	8-719-510-73	S3L20UF4
D6820	8-719-970-87	ERA38-06
D6821	8-719-970-87	ERA38-06
D6823	8-719-911-19	1SS119-25
D6824	8-719-510-73	S3L20UF4
D6825	8-719-914-43	DAN202K
D6826	8-719-911-19	1SS119-25
D6830	8-719-914-43	DAN202K

<FERRITE BEAD>

FB6602	1-239-358-21	FILTER, NOISE	
FB6603	1-239-358-21	FILTER, NOISE	
FB6604	1-410-396-41	FERRITE	0.45UH
FB6605	1-410-396-41	FERRITE	0.45UH
FB6606	1-410-397-21	FERRITE	1.1UH

<IC>

IC6600	8-759-670-30	MCZ3001D
IC6601	8-759-198-31	UPC1093J-1-T

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Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION	REMARK
IC6607	8-749-012-13	DM-58	
IC6608	8-759-133-90	UPC339C	
IC6800	8-759-192-71	STV9379	
IC6801	8-759-450-95	LM393N	
IC6804	8-759-394-36	BA09T	
IC6805	8-759-394-35	BA12T	
		<CHIP CONDUCTOR>	
JR6601	1-216-295-91	SHORT 0	
JR6603	1-216-295-91	SHORT 0	
JR6606	1-216-295-91	SHORT 0	
JR6607	1-216-295-91	SHORT 0	
JR6608	1-216-295-91	SHORT 0	
JR6609	1-216-295-91	SHORT 0	
JR6610	1-216-295-91	SHORT 0	
JR6611	1-216-295-91	SHORT 0	
JR6612	1-216-295-91	SHORT 0	
JR6613	1-216-295-91	SHORT 0	
JR6893	1-216-295-91	SHORT 0	
		<COIL>	
L6600	1-410-396-41	FERRITE 0.45UH	
L6604	1-412-525-31	INDUCTOR 10UH	
L6605	1-412-525-31	INDUCTOR 10UH	
L6606	1-412-525-31	INDUCTOR 10UH	
L6607	1-412-519-11	INDUCTOR 3.3UH	
L6608	1-412-525-31	INDUCTOR 10UH	
L6609	1-410-396-41	FERRITE 0.45UH	
L6800	1-412-525-31	INDUCTOR 10UH	
L6801	1-406-675-11	INDUCTOR 4.7MH	
L6803	1-406-985-11	INDUCTOR 2.2MH	
L6804	1-412-519-11	INDUCTOR 3.3UH	
L6805	1-412-519-11	INDUCTOR 3.3UH	
L6806	1-412-519-11	INDUCTOR 3.3UH	
L6807	1-412-552-11	INDUCTOR 2.2MH	
L6808	1-406-674-11	INDUCTOR 3.3MH	
		<PHOTO COUPLER>	
PH6601 ⚠	8-749-924-35	ON3171-R	
PH6602 ⚠	8-749-924-35	ON3171-R	
		<IC LINK>	
PS6605	1-533-597-41	LINK, IC	
PS6606	1-533-597-41	LINK, IC	
PS6801	1-532-841-21	LINK, IC	
		<TRANSISTOR>	
Q6100	8-729-046-40	2SK2663	
Q6102	8-729-023-22	2SD2114K	
Q6600	8-729-052-32	IRFIB7N50A	
Q6601	8-729-119-78	2SC2785-HFE	
Q6602	8-729-119-78	2SC2785-HFE	
Q6603	8-729-052-32	IRFIB7N50A	
Q6604	8-729-119-76	2SA1175-HFE	
Q6605	8-729-230-49	2SC2712-YG	
Q6608	8-729-200-21	2SC2500-B	
Q6609	8-729-029-56	DTA144ESA	

REF NO.	PART NO.	DESCRIPTION	REMARK
Q6610	8-729-119-78	2SC2785-HFE	
Q6611	8-729-029-66	DTC114ESA	
Q6613	8-729-030-02	DTC144ESA	
Q6614	8-729-119-76	2SA1175-HFE	
Q6619	8-729-119-78	2SC2785-HFE	
Q6620	8-729-119-78	2SC2785-HFE	
Q6802	8-729-046-33	IRF720-LF49	
Q6803	8-729-119-76	2SA1175-HFE	
Q6804	8-729-119-78	2SC2785-HFE	
Q6805	8-729-140-96	2SD774-34	
Q6806	8-729-140-96	2SD774-34	
Q6807	8-729-046-18	2SC5480-01	
Q6808	8-729-046-18	2SC5480-01	
Q6809	8-729-038-83	TRANSISTOR 2SK2251-01-F19	
Q6810	8-729-047-60	IRFI830G-LF49	
Q6811	1-801-806-11	TR DTC144EKA	
Q6812	8-729-043-95	2SC3840(3)	
Q6813	8-729-422-33	2SD601A-Q-TX	
Q6814	8-729-026-49	2SA1037AK-T146-R	
Q6815	8-729-045-65	2SA1776TV2Q	
Q6816	8-729-140-96	2SD774-34	
Q6817	8-729-422-33	2SD601A-Q-TX	
Q6818	1-801-806-11	TR DTC144EKA	
Q6819	1-801-806-11	TR DTC144EKA	
Q6820	8-729-422-33	2SD601A-Q-TX	
Q6821	8-729-026-49	2SA1037AK-T146-R	
Q6822	8-729-026-49	2SA1037AK-T146-R	
Q6823	8-729-422-33	2SD601A-Q-TX	
		<RESISTOR>	
R6100	1-260-298-51	CARBON 3.3 5% 1/2W	
R6101	1-216-045-00	RES-CHIP 680 5% 1/10W	
R6102	1-249-389-11	CARBON 4.7 5% 1/4W	
R6103	1-216-009-91	RES-CHIP 22 5% 1/10W	
R6104	1-240-205-91	CARBON 22M 5% 1/2W	
R6105	1-216-097-11	RES-CHIP 100K 5% 1/10W	
R6106	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R6107	1-216-089-91	RES-CHIP 47K 5% 1/10W	
R6108	1-215-493-00	METAL 1M 1% 1/4W	
R6110	1-249-413-11	CARBON 470 5% 1/4W	
R6500	1-220-797-11	CEMENTED 0.47 5% 10W	
R6600	1-216-295-91	SHORT 0	
R6602	1-249-417-11	CARBON 1K 5% 1/4W	
R6603	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
R6604	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
R6605	1-215-471-00	METAL 120K 1% 1/4W	
R6606	1-215-466-00	METAL 75K 1% 1/4W	
R6607	1-215-489-00	METAL 680K 1% 1/4W	
R6608	1-215-489-00	METAL 680K 1% 1/4W	
R6609	1-215-489-00	METAL 680K 1% 1/4W	
R6610	1-208-830-11	METAL CHIP 100K 0.5% 1/10W	
R6611	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
R6612	1-215-471-00	METAL 120K 1% 1/4W	
R6613	1-215-489-00	METAL 680K 1% 1/4W	
R6614	1-215-489-00	METAL 680K 1% 1/4W	
R6615	1-215-489-00	METAL 680K 1% 1/4W	
R6616	1-208-830-11	METAL CHIP 100K 0.5% 1/10W	
R6617	1-208-844-11	METAL CHIP 390K 0.5% 1/10W	
R6618	1-215-466-00	METAL 75K 1% 1/4W	
R6619	1-216-113-00	RES-CHIP 470K 5% 1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R6620	1-208-846-11	METAL CHIP	470K	0.5%	1/10W
R6621	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6622	1-220-797-11	CEMENTED	0.47	5%	10W
R6623	1-215-864-00	METAL OXIDE	150	5%	1W
R6624	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6625	1-215-864-00	METAL OXIDE	150	5%	1W
R6626	1-215-444-00	METAL	9.1K	1%	1/4W
R6627	1-215-481-00	METAL	330K	1%	1/4W
R6628	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6629	1-215-481-00	METAL	330K	1%	1/4W
R6630	1-215-481-00	METAL	330K	1%	1/4W
R6631	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6632	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R6633	1-215-458-00	METAL	36K	1%	1/4W
R6634	1-215-489-00	METAL	680K	1%	1/4W
R6635	1-215-489-00	METAL	680K	1%	1/4W
R6636	1-215-489-00	METAL	680K	1%	1/4W
R6637	1-215-463-00	METAL	56K	1%	1/4W
R6638	1-240-876-11	CEMENTED	1	5%	15W
R6639	1-240-876-11	CEMENTED	1	5%	15W
R6640	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6641	1-260-131-11	CARBON	470K	5%	1/2W
R6642	1-260-131-11	CARBON	470K	5%	1/2W
R6643	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6644	1-249-417-11	CARBON	1K	5%	1/4W
R6645	1-220-886-11	FUSIBLE	0.1	10%	1W
R6647	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R6648	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6649	1-249-425-11	CARBON	4.7K	5%	1/4W
R6651	1-217-157-00	METAL	0.33	10%	5W
R6654	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6655	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6658	1-249-393-11	CARBON	10	5%	1/4W
R6659	1-249-393-11	CARBON	10	5%	1/4W
R6660	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6662	1-249-429-11	CARBON	10K	5%	1/4W
R6663	1-249-429-11	CARBON	10K	5%	1/4W
R6664	1-249-421-11	CARBON	2.2K	5%	1/4W
R6666	1-249-429-11	CARBON	10K	5%	1/4W
R6667	1-249-425-11	CARBON	4.7K	5%	1/4W
R6669	1-249-417-11	CARBON	1K	5%	1/4W
R6670	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6671	1-217-611-00	METAL	0.1	10%	2W
R6672	1-249-421-11	CARBON	2.2K	5%	1/4W
R6674	1-249-418-11	CARBON	1.2K	5%	1/4W
R6675	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R6679	1-249-437-11	CARBON	47K	5%	1/4W
R6680	1-216-362-11	METAL OXIDE	0.27	5%	2W
R6681	1-249-429-11	CARBON	10K	5%	1/4W
R6682	1-249-416-11	CARBON	820	5%	1/4W
R6683	1-260-127-11	CARBON	220K	5%	1/2W
R6685	1-249-421-11	CARBON	2.2K	5%	1/4W
R6686	⚠ 1-247-289-11	METAL	8.2M	5%	1W
R6688	1-249-417-11	CARBON	1K	5%	1/4W
R6689	1-249-389-11	CARBON	4.7	5%	1/4W
R6690	1-249-429-11	CARBON	10K	5%	1/4W
R6691	1-260-131-11	CARBON	470K	5%	1/2W
R6692	1-249-410-11	CARBON	270	5%	1/4W
R6693	1-215-451-00	METAL	18K	1%	1/4W
R6694	1-215-471-00	METAL	120K	1%	1/4W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R6696	1-215-925-11	METAL OXIDE	22K	5%	3W
R6699	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6701	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6702	1-216-689-11	RES-CHIP	39K	5%	1/10W
R6704	1-249-377-11	CARBON	0.47	5%	1/4W
R6710	1-217-158-00	METAL	0.47	10%	5W
R6713	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6715	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6800	1-249-429-11	CARBON	10K	5%	1/4W
R6801	1-249-429-11	CARBON	10K	5%	1/4W
R6802	1-249-429-11	CARBON	10K	5%	1/4W
R6803	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6804	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R6805	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R6806	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R6807	1-249-383-11	CARBON	1.5	5%	1/4W
R6810	1-214-798-21	METAL	1.8	1%	1/2W
R6811	1-215-913-11	METAL OXIDE	220	5%	3W
R6813	1-214-798-21	METAL	1.8	1%	1/2W
R6814	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6815	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W
R6816	1-214-915-00	METAL	120K	1%	1/2W
R6818	1-215-485-00	METAL	470K	1%	1/4W
R6819	1-249-421-11	CARBON	2.2K	5%	1/4W
R6820	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6822	1-216-461-00	METAL OXIDE	5.6K	5%	2W
R6823	1-215-895-11	METAL OXIDE	3.3K	5%	2W
R6824	1-249-408-11	CARBON	180	5%	1/4W
R6825	1-249-408-11	CARBON	180	5%	1/4W
R6826	1-216-459-00	METAL OXIDE	2.7K	5%	2W
R6827	1-215-895-11	METAL OXIDE	3.3K	5%	2W
R6828	1-249-411-11	CARBON	330	5%	1/4W
R6829	1-249-411-11	CARBON	330	5%	1/4W
R6830	1-247-764-11	CARBON	10K	5%	1/2W
R6831	1-247-764-11	CARBON	10K	5%	1/2W
R6832	1-215-477-00	METAL	220K	1%	1/4W
R6833	1-215-493-00	METAL	1M	1%	1/4W
R6834	1-216-381-11	METAL OXIDE	0.22	5%	3W
R6835	1-216-381-11	METAL OXIDE	0.22	5%	3W
R6836	1-215-905-11	METAL OXIDE	10	5%	3W
R6837	1-215-905-11	METAL OXIDE	10	5%	3W
R6838	1-215-461-00	METAL	47K	1%	1/4W
R6839	1-249-405-11	CARBON	100	5%	1/4W
R6841	1-216-434-11	METAL OXIDE	1.8K	5%	1W
R6842	1-215-923-00	METAL OXIDE	10K	5%	3W
R6843	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6844	1-247-807-31	CARBON	100	5%	1/4W
R6845	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
R6846	1-260-127-11	CARBON	220K	5%	1/2W
R6847	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6848	1-216-101-00	RES-CHIP	150K	5%	1/10W
R6851	1-260-288-11	CARBON	0.47	5%	1/2W
R6852	1-216-345-11	METAL OXIDE	0.47	5%	1W
R6853	1-260-288-11	CARBON	0.47	5%	1/2W
R6854	1-215-923-00	METAL OXIDE	10K	5%	3W
R6855	1-214-899-81	METAL	27K	1%	1/2W
R6856	1-215-923-00	METAL OXIDE	10K	5%	3W
R6857	1-215-923-00	METAL OXIDE	10K	5%	3W
R6858	1-214-899-81	METAL	27K	1%	1/2W
R6859	1-215-871-11	METAL OXIDE	2.2K	5%	1W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION			REMARK
R6860	1-215-923-00	METAL OXIDE	10K	5%	3W
R6861	1-216-295-91	SHORT	0		
R6862	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6863	1-215-894-11	METAL OXIDE	2.2K	5%	2W
R6864	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6865	1-216-103-00	RES-CHIP	180K	5%	1/10W
R6866	1-215-433-00	METAL	3.3K	1%	1/4W
R6867	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6868	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6869	1-216-115-00	RES-CHIP	560K	5%	1/10W
R6870	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6871	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6872	1-260-125-11	CARBON	150K	5%	1/2W
R6873	1-260-125-11	CARBON	150K	5%	1/2W
R6875	1-249-417-11	CARBON	1K	5%	1/4W
R6876	1-216-391-11	METAL OXIDE	1.5	5%	3W
R6877	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R6878	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R6879	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6880	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R6881	1-215-453-00	METAL	22K	1%	1/4W
R6882	1-215-456-00	METAL	30K	1%	1/4W
R6883	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6884	1-249-441-11	CARBON	100K	5%	1/4W
R6885	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6886	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6887	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6888	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6889	1-260-125-11	CARBON	150K	5%	1/2W
R6890	1-260-125-11	CARBON	150K	5%	1/2W
R6891	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R6892	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6893	1-216-085-91	RES-CHIP	33K	5%	1/10W
R6894	1-260-133-11	CARBON	680K	5%	1/2W
R6895	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6896	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6897	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6899	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6900	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6901	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6902	1-249-441-11	CARBON	100K	5%	1/4W
R6903	1-215-923-00	METAL OXIDE	10K	5%	3W
R6905	1-249-389-11	CARBON	4.7	5%	1/4W
R6906	1-216-079-00	RES-CHIP	18K	5%	1/10W
R6907	1-216-079-00	RES-CHIP	18K	5%	1/10W

<RELAY>

RY6601 ⚠	1-755-198-12	RELAY	
RY6602 ⚠	1-755-357-11	RELAY, AC POWER	
RY6603 ⚠	1-755-357-11	RELAY, AC POWER	

<TRANSFORMER>

T6100 ⚠	1-433-844-11	TRANSFORMER, CONVERTER	
T6602 ⚠	1-435-690-11	TRANSFORMER, CONVERTER (PIT)	
T6800	1-429-741-11	TRANSFORMER, DRIVE	
T6801	1-433-934-11	TRANSFORMER, FERRITE (DFT)	
T6802	1-433-489-11	TRANSFORMER, FERRITE (HDT)	
T6803 ⚠	1-453-363-11	TRANSFORMER ASSY FLYBACK (NX-4522//J1B4)	
T6804	1-433-489-11	TRANSFORMER, FERRITE (HDT)	

REF NO.	PART NO.	DESCRIPTION	REMARK
		<THERMISTOR>	
TH6100	1-803-586-11	THERMISTOR, NTC	
TH6601	1-803-540-11	THERMISTOR	
		<VARISTOR>	
VD6601	1-803-614-11	VARISTOR	
VD6603	1-803-830-11	VARISTOR (ERZV14D621)	

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*	A-1343-928-A	D1 BOARD MOUNTED	
		**********	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		<CAPACITOR>	

C4800	1-136-165-00	FILM	0.1UF	5.00%	50V
C4801	1-136-161-00	FILM	0.047UF	5.00%	50V
C4802	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C4803	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4804	1-126-967-11	ELECT	47UF	20.00%	50V
C4805	1-126-964-11	ELECT	10UF	20.00%	50V
C4806	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C4807	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C4808	1-136-165-00	FILM	0.1UF	5.00%	50V
C4809	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C4810	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4811	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4812	1-126-967-11	ELECT	47UF	20.00%	50V
C4813	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4814	1-126-947-11	ELECT	47UF	20.00%	25V
C4815	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C4816	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C4817	1-126-947-11	ELECT	47UF	20.00%	25V
C4818	1-126-961-11	ELECT	2.2UF	20.00%	50V
C4820	1-107-909-11	ELECT	47UF	20.00%	50V
C4821	1-107-909-11	ELECT	47UF	20.00%	16V
C4822	1-107-909-11	ELECT	47UF	20.00%	16V
C4823	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C4824	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C4825	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4833	1-126-964-11	ELECT	10UF	20.00%	50V
C4834	1-126-933-11	ELECT	100UF	20.00%	16V
C4835	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4850	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6101	1-107-714-11	ELECT	10UF	20.00%	50V
C6102	1-109-953-11	ELECT	2.2UF	20.00%	50V
C6103	1-107-714-11	ELECT	10UF	20.00%	50V
C6104	1-126-965-91	ELECT	22UF	20.00%	50V
C6105	1-126-933-11	ELECT	100UF	20.00%	16V
C6108	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6109	1-126-947-11	ELECT	47UF	20.00%	25V
C6112	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C6113	1-136-347-11	FILM	0.0047UF	5.00%	630V
C6114	1-126-947-11	ELECT	47UF	20.00%	25V
C6115	1-163-005-91	CERAMIC CHIP	470PF	10.00%	50V
C6116	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C6117	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V

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REF NO.	PART NO.	DESCRIPTION		REMARK	
C6118	1-107-909-11	ELECT	47UF	20.00%	16V
C6120	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C6121	1-126-963-11	ELECT	4.7UF	20.00%	50V
C6122	1-126-947-11	ELECT	47UF	20.00%	25V
C6123	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6124	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6125	1-128-551-11	ELECT	22UF	20.00%	25V
C6127	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6128	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6129	1-126-964-11	ELECT	10UF	20.00%	50V
C6131	1-126-964-11	ELECT	10UF	20.00%	50V
C6133	1-137-194-81	FILM	0.47UF	5.00%	50V
C6136	1-129-716-00	FILM	0.015UF	5.00%	630V
C6138	1-126-968-11	ELECT	100UF	20.00%	50V
C6139	1-107-902-11	ELECT	1UF	20.00%	50V
C6140	1-126-960-11	ELECT	1UF	20.00%	50V
C6201	1-126-947-11	ELECT	47UF	20.00%	25V
C6202	1-126-947-11	ELECT	47UF	20.00%	25V
C6203	1-126-947-11	ELECT	47UF	20.00%	25V
C6204	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6205	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6206	1-126-964-11	ELECT	10UF	20.00%	50V
C6207	1-126-947-11	ELECT	47UF	20.00%	25V
C6208	1-126-947-11	ELECT	47UF	20.00%	25V
C6209	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C6210	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C6211	1-126-964-11	ELECT	10UF	20.00%	50V
C6212	1-164-222-91	CERAMIC CHIP	0.22UF		25V
C6350	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6351	1-126-947-11	ELECT	47UF	20.00%	25V
C6353	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6354	1-126-964-11	ELECT	10UF	20.00%	50V
C6355	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6356	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C6358	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6361	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6362	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C6365	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C6376	1-126-947-11	ELECT	47UF	20.00%	25V
C6377	1-126-947-11	ELECT	47UF	20.00%	25V
C6378	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6380	1-136-495-11	FILM	0.068UF	5.00%	50V
C6381	1-126-964-11	ELECT	10UF	20.00%	50V
C6385	1-126-947-11	ELECT	47UF	20.00%	25V
C6386	1-126-947-11	ELECT	47UF	20.00%	25V
C6388	1-126-964-11	ELECT	10UF	20.00%	50V
C6392	1-126-947-11	ELECT	47UF	20.00%	25V
C6409	1-126-963-11	ELECT	4.7UF	20.00%	50V
		<CONNECTOR>			
CN4800	1-695-915-11	TAB (CONTACT)			
CN4801 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN6100	1-783-966-11	CONNECTOR, BOARD TO BOARD 30P			
CN6103 *	1-564-518-11	PLUG, CONNECTOR 3P			
CN6104 *	1-564-523-11	PLUG, CONNECTOR 8P			
CN6106	1-783-966-11	CONNECTOR, BOARD TO BOARD 30P			
		<DIODE>			
D4800	8-719-914-43	DAN202K			
D4801	8-719-914-43	DAN202K			
D4802	8-719-109-81	RD4.7ESB2			
D4803	8-719-911-19	1SS119-25			
D4804	8-719-911-19	1SS119-25			
D4808	8-719-914-43	DAN202K			
D4809	8-719-914-43	DAN202K			
D4811	1-249-381-11	CARBON	1	5%	1/4W
D4812	8-719-911-19	1SS119-25			
D4813	8-719-109-89	RD5.6ESB2			
D4814	8-719-404-50	MA111-TX			
D4815	8-719-109-54	RD2.2ES-B2			
D4816	8-719-911-19	1SS119-25			
D6101	8-719-510-02	D1NS4			
D6102	8-719-510-02	D1NS4			
D6103	8-719-063-73	DIODE D1NL20U-TR			
D6104	8-719-911-19	1SS119-25			
D6105	8-719-109-60	RD2.7ESB2			
D6106	8-719-510-02	D1NS4			
D6107	8-719-109-84	RD5.1ES-B1			
D6108	8-719-911-19	1SS119-25			
D6109	8-719-911-19	1SS119-25			
D6110	8-719-987-87	ERA85-009			
D6133	8-719-911-19	1SS119-25			
D6134	8-719-911-19	1SS119-25			
D6201	8-719-109-88	RD5.6ES-B1			
D6210	8-719-109-88	RD5.6ES-B1			
D6350	8-719-914-43	DAN202K			
D6351	8-719-914-43	DAN202K			
D6355	8-719-914-43	DAN202K			
D6404	8-719-914-43	DAN202K			
		<IC>			
IC4800	8-759-450-95	LM393N			
IC4801	8-759-450-95	LM393N			
IC4802	8-759-638-79	NJM3404AD-W			
IC4803	8-759-135-80	UPC358C			
IC6101	8-752-053-21	CXA1211M			
IC6102	8-759-450-95	LM393N			
IC6103	8-759-450-95	LM393N			
IC6104	8-759-803-42	LA6500-FA			
IC6105	8-759-450-95	LM393N			
IC6106	8-759-198-31	UPC1093J-1-T			
IC6107	8-759-325-48	CA0005AD			
IC6108	8-759-567-08	MB88141APF-ER			
IC6201	8-759-183-37	CA0007AD			
IC6202	8-759-135-80	UPC358C			
IC6351	8-759-450-95	LM393N			
IC6353	8-759-231-53	TA7805S			
IC6354	8-759-325-48	CA0005AD			
IC6356	8-759-822-38	LA6510			
		<CHIP CONDUCTOR>			
JR6100	1-216-295-91	SHORT	0		
JR6101	1-216-295-91	SHORT	0		
JR6102	1-216-295-91	SHORT	0		
JR6103	1-216-295-91	SHORT	0		
JR6104	1-216-295-91	SHORT	0		
JR6105	1-216-295-91	SHORT	0		
JR6106	1-216-295-91	SHORT	0		
JR6107	1-216-295-91	SHORT	0		
JR6108	1-216-295-91	SHORT	0		
JR6109	1-216-295-91	SHORT	0		

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REF NO.	PART NO.	DESCRIPTION		REMARK	
JR6112	1-216-295-91	SHORT	0		
JR6113	1-216-295-91	SHORT	0		
JR6114	1-216-295-91	SHORT	0		
JR6115	1-216-295-91	SHORT	0		
JR6116	1-216-295-91	SHORT	0		
		<COIL>			
L4800	1-412-537-31	INDUCTOR	100UH		
L6101	1-416-920-11	INDUCTOR	10MH		
L6102	1-406-989-21	INDUCTOR	10MH		
		<IC LINK>			
PS6101	1-533-589-31	LINK, IC			
		<TRANSISTOR>			
Q4800	8-729-230-49	2SC2712-YG			
Q4801	8-729-230-49	2SC2712-YG			
Q4802	8-729-230-49	2SC2712-YG			
Q4803	8-729-230-49	2SC2712-YG			
Q4804	8-729-230-49	2SC2712-YG			
Q4805	8-729-230-49	2SC2712-YG			
Q4806	8-729-230-49	2SC2712-YG			
Q4807	8-729-230-49	2SC2712-YG			
Q4808	8-729-424-02	2SB709A-QRS-TX			
Q4809	8-729-424-02	2SB709A-QRS-TX			
Q4810	8-729-230-49	2SC2712-YG			
Q4811	8-729-230-49	2SC2712-YG			
Q4812	8-729-424-02	2SB709A-QRS-TX			
Q4813	8-729-424-02	2SB709A-QRS-TX			
Q4814	8-729-424-02	2SB709A-QRS-TX			
Q4815	8-729-424-02	2SB709A-QRS-TX			
Q4816	8-729-026-49	2SA1037AK-T146-R			
Q4817	8-729-230-49	2SC2712-YG			
Q4818	8-729-424-02	2SB709A-QRS-TX			
Q4820	8-729-230-49	2SC2712-YG			
Q4821	1-801-806-11	TR DTC144EKA			
Q4822	8-729-230-49	2SC2712-YG			
Q6103	8-729-046-33	IRF720-LF49			
Q6104	8-729-230-49	2SC2712-YG			
Q6105	8-729-230-49	2SC2712-YG			
Q6106	8-729-026-49	2SA1037AK-T146-R			
Q6107	8-729-140-93	2SB733-34			
Q6118	8-729-230-49	2SC2712-YG			
Q6124	1-801-806-11	TR DTC144EKA			
Q6125	8-729-230-49	2SC2712-YG			
Q6126	8-729-026-49	2SA1037AK-T146-R			
Q6128	8-729-023-22	2SD2114K			
Q6201	8-729-230-49	2SC2712-YG			
Q6202	8-729-230-49	2SC2712-YG			
Q6203	8-729-422-33	2SD601A-Q-TX			
Q6350	8-729-230-49	2SC2712-YG			
Q6356	8-729-230-49	2SC2712-YG			
Q6405	8-729-026-49	2SA1037AK-T146-R			
Q6455	8-729-230-49	2SC2712-YG			
		<RESISTOR>			
R4408	1-216-025-11	RES-CHIP	100	5%	1/10W
R4409	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4410	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4411	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4412	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4413	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4800	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4801	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4802	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4803	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4804	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4805	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R4806	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R4807	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4809	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4810	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4811	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4812	1-216-295-91	SHORT	0		
R4813	1-216-089-91	RES-CHIP	47K	5%	1/10W
R4814	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4815	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4816	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4817	1-208-854-11	METAL CHIP	1M	0.5%	1/10W
R4818	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4819	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4820	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4821	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4822	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4823	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4824	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4825	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4826	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4827	1-216-295-91	SHORT	0		
R4828	1-249-415-11	CARBON	680	5%	1/4W
R4829	1-249-415-11	CARBON	680	5%	1/4W
R4831	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R4832	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4833	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4834	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4835	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4836	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4837	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4838	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4839	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W
R4840	1-216-295-91	SHORT	0		
R4841	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4842	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4843	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4844	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R4845	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4846	1-216-295-91	SHORT	0		
R4847	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4848	1-216-073-91	RES-CHIP	10K	5%	1/10W
R4849	1-216-085-91	RES-CHIP	33K	5%	1/10W
R4850	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4851	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R4852	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4853	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R4854	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R4855	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4856	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4857	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R4859	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R4860	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R4861	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4862	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4864	1-208-788-11	METAL CHIP	1.8K	0.5%	1/10W
R4865	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R4866	1-216-089-91	RES-CHIP	47K	5%	1/10W
R4869	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4871	1-208-826-11	METAL CHIP	68K	0.5%	1/10W
R4872	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4874	1-216-295-91	SHORT	0		
R4875	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4877	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4878	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
R4879	1-216-105-91	RES-CHIP	220K	5%	1/10W
R4880	1-216-295-91	SHORT	0		
R4881	1-216-295-91	SHORT	0		
R4882	1-218-760-11	METAL CHIP	220K	0.5%	1/10W
R4883	1-208-842-11	METAL CHIP	330K	0.5%	1/10W
R4884	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4887	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4892	1-216-295-91	SHORT	0		
R6101	1-216-025-11	RES-CHIP	100	5%	1/10W
R6103	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6104	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6105	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6106	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6107	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6108	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6109	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6110	1-216-295-91	SHORT	0		
R6113	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6114	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6115	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R6116	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6117	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R6118	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6119	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R6120	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6121	1-216-490-11	METAL OXIDE	39K	5%	3W
R6122	1-216-295-91	SHORT	0		
R6123	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R6124	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R6126	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6127	1-208-832-11	METAL CHIP	120K	0.5%	1/10W
R6128	1-218-760-11	METAL CHIP	220K	0.5%	1/10W
R6129	1-216-353-00	METAL OXIDE	2.2	5%	1W
R6130	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6131	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R6133	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R6134	1-208-803-11	METAL CHIP	7.5K	0.5%	1/10W
R6135	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6136	1-260-328-11	CARBON	1K	5%	1/2W
R6137	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6138	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6139	1-208-803-11	METAL CHIP	7.5K	0.5%	1/10W
R6140	1-216-077-91	RES-CHIP	15K	5%	1/10W
R6141	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6142	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6143	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R6144	1-208-840-11	METAL CHIP	270K	0.5%	1/10W
R6149	1-208-828-11	METAL CHIP	82K	0.5%	1/10W
R6150	1-208-806-11	METAL CHIP	10K	0.5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R6151	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6152	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6153	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6154	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R6155	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6156	1-216-077-91	RES-CHIP	15K	5%	1/10W
R6157	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6158	1-216-689-11	RES-CHIP	39K	5%	1/10W
R6159	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R6161	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R6162	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6168	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6169	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R6170	1-216-037-00	RES-CHIP	330	5%	1/10W
R6171	1-216-113-00	RES-CHIP	470K	5%	1/10W
R6172	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6173	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6174	1-216-079-00	RES-CHIP	18K	5%	1/10W
R6175	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R6176	1-249-389-11	CARBON	4.7	5%	1/4W
R6177	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6178	1-249-389-11	CARBON	4.7	5%	1/4W
R6180	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6190	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6192	1-216-295-91	SHORT	0		
R6195	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6196	1-249-377-11	CARBON	0.47	5%	1/4W
R6197	1-216-295-91	SHORT	0		
R6200	1-208-827-11	METAL CHIP	75K	0.5%	1/10W
R6201	1-247-750-11	CARBON	680	5%	1/2W
R6202	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R6203	1-215-906-11	METAL OXIDE	15	5%	3W
R6204	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6206	1-216-033-00	RES-CHIP	220	5%	1/10W
R6207	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R6208	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6209	1-216-099-00	RES-CHIP	120K	5%	1/10W
R6210	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6211	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6212	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6213	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6215	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
R6216	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6217	1-216-073-91	RES-CHIP	10K	5%	1/10W
R6218	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
R6219	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R6220	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6221	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6222	1-216-295-91	SHORT	0		
R6223	1-216-295-91	SHORT	0		
R6224	1-208-824-11	METAL CHIP	56K	0.5%	1/10W
R6225	1-208-824-11	METAL CHIP	56K	0.5%	1/10W
R6226	1-216-033-00	RES-CHIP	220	5%	1/10W
R6227	1-216-033-00	RES-CHIP	220	5%	1/10W
R6324	1-216-017-91	RES-CHIP	47	5%	1/10W
R6325	1-216-017-91	RES-CHIP	47	5%	1/10W
R6326	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6327	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R6350	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R6357	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6359	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6360	1-216-073-91	RES-CHIP	10K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

D1 DH F1 H1

REF NO.	PART NO.	DESCRIPTION			REMARK
R6361	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6367	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6368	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6375	1-216-041-00	RES-CHIP	470	5%	1/10W
R6378	1-215-473-00	METAL	150K	1%	1/4W
R6379	1-216-295-91	SHORT	0		
R6382	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6385	1-216-295-91	SHORT	0		
R6386	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6391	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6394	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R6413	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6416	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6418	1-216-113-00	RES-CHIP	470K	5%	1/10W
R6419	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6420	1-216-111-00	RES-CHIP	390K	5%	1/10W
R6433	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6438	1-215-437-00	METAL	4.7K	1%	1/4W
R6442	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6456	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6457	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R6458	1-216-089-91	RES-CHIP	47K	5%	1/10W
R6459	1-216-057-00	RES-CHIP	2.2K	5%	1/10W

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* A-1333-004-A DH BOARD MOUNTED
****

<CAPACITOR>

C4701	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4702	1-126-964-11	ELECT	10UF	20.00%	50V
C4703	1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C4704	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V

<CONNECTOR>

CN4701 * 1-564-507-11 PLUG, CONNECTOR 4P

<TRANSISTOR>

Q4701	8-729-230-49	2SC2712-YG
Q4702	8-729-230-49	2SC2712-YG
Q4703	8-729-424-02	2SB709A-QRS-TX
Q4704	8-729-424-02	2SB709A-QRS-TX

<RESISTOR>

R4701	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4702	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4703	1-208-818-11	METAL CHIP	33K	0.5%	1/10W
R4704	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4705	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4706	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4707	1-216-057-00	RES-CHIP	2.2K	5%	1/10W

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REF NO.	PART NO.	DESCRIPTION			REMARK
	* A-1241-437-A	F1 BOARD MOUNTED			
		**********			
	1-533-223-11	HOLDER, FUSE			
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE			

<CAPACITOR>

C1601	⚠	1-104-708-51	MYLAR	0.47UF	20.00%	250V
C1602	⚠	1-109-835-51	MYLAR	0.68UF	20.00%	250V
C1603	⚠	1-117-703-51	CERAMIC	0.0047UF	99%	250V

<CONNECTOR>

CN1601	⚠	1-580-843-11	PIN, CONNECTOR (POWER)
CN1602	⚠	1-580-843-11	PIN, CONNECTOR (POWER)
CN1604		1-695-915-11	TAB (CONTACT)

<FUSE>

F1601 ⚠ 1-576-334-11 FUSE, TIME-LAG 5A/250V

<FERRITE BEAD>

FB1601	1-410-397-21	FERRITE	1.1UH
FB1602	1-410-397-21	FERRITE	1.1UH
FB1603	1-410-397-21	FERRITE	1.1UH
FB1604	1-410-397-21	FERRITE	1.1UH

<RESISTOR>

R1601	⚠	1-202-885-91	SOLID	1M	10%	1/2W

<TRANSFORMER>

T1601	⚠	1-433-900-21	TRANSFORMER, LINE FILTER
T1602	⚠	1-433-900-21	TRANSFORMER, LINE FILTER

<VARISTOR>

VDR161 1-803-830-11 VARISTOR (ERZV14D621)

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* A-1372-869-A H1 BOARD MOUNTED
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* 4-055-304-01 HOLDER, LED

<CAPACITOR>

C1910	1-126-947-11	ELECT	47UF	20.00%	16V
C1911	1-126-947-11	ELECT	47UF	20.00%	16V
C1912	1-102-824-00	CERAMIC	470PF	5.00%	50V
C1930	1-136-153-00	FILM	0.01UF	5.00%	50V
C1932	1-136-153-00	FILM	0.01UF	5.00%	50V
C1935	1-102-824-00	CERAMIC	470PF	5.00%	50V
C1938	1-102-824-00	CERAMIC	470PF	5.00%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

H1 **J**

REF NO.		PART NO.	DESCRIPTION			REMARK
			<CONNECTOR>			
CN1651	*	1-580-844-11	PIN, CONNECTOR (POWER)			
CN1652	*	1-580-844-11	PIN, CONNECTOR (POWER)			
CN1905	*	1-764-333-11	PLUG, CONNECTOR 10P			
CN1932	*	1-564-509-11	PLUG, CONNECTOR 6P			
CN1934	*	1-764-333-11	PLUG, CONNECTOR 10P			
			<DIODE>			
D1905		8-719-070-16	NNCD9.1A-T1			
D1906		8-719-083-18	DIODE SPB-25MVWF			
D1907		8-719-070-16	NNCD9.1A-T1			
D1930		8-719-929-15	HZS9.1NB2			
D1944		8-719-070-16	NNCD9.1A-T1			
D1945		8-719-911-19	1SS119-25			
D1946		8-719-911-19	1SS119-25			
			<IC>			
IC1901		8-742-134-01	SBX1981-51RP			
			<JACK>			
J1931		1-770-786-11	JACK			
J1932		1-784-646-11	TERMINAL, S			
J1933		1-770-329-11	JACK, PIN 3P			
			<COIL>			
L1931		1-414-856-11	INDUCTOR	10UH		
L1932		1-414-856-11	INDUCTOR	10UH		
			<TRANSISTOR>			
Q1901		8-729-030-02	DTC144ESA			
Q1902		8-729-030-02	DTC144ESA			
			<RESISTOR>			
R1911		1-249-411-11	CARBON	330	5%	1/4W
R1913		1-249-429-11	CARBON	10K	5%	1/4W
R1914		1-249-411-11	CARBON	330	5%	1/4W
R1915		1-249-429-11	CARBON	10K	5%	1/4W
R1916		1-249-401-11	CARBON	47	5%	1/4W
R1917		1-247-807-31	CARBON	100	5%	1/4W
R1920		1-247-807-31	CARBON	100	5%	1/4W
R1921		1-247-807-31	CARBON	100	5%	1/4W
R1933		1-247-895-91	CARBON	470K	5%	1/4W
R1934		1-247-807-31	CARBON	100	5%	1/4W
R1935		1-247-807-31	CARBON	100	5%	1/4W
R1936		1-247-895-91	CARBON	470K	5%	1/4W
R1952		1-249-421-11	CARBON	2.2K	5%	1/4W
R1970		1-249-426-11	CARBON	5.6K	5%	1/4W
R1971		1-249-413-11	CARBON	470	5%	1/4W
R1972		1-249-417-11	CARBON	1K	5%	1/4W
R1973		1-249-420-11	CARBON	1.8K	5%	1/4W
R1974		1-247-843-11	CARBON	3.3K	5%	1/4W

REF NO.		PART NO.	DESCRIPTION			REMARK
			<SWITCH>			
S1651	⚠	1-571-433-31	SWITCH, PUSH (AC POWER)			
S1972		1-692-431-21	SWITCH, TACTILE			
S1973		1-692-431-21	SWITCH, TACTILE			
S1974		1-692-431-21	SWITCH, TACTILE			
S1975		1-692-431-21	SWITCH, TACTILE			
S1976		1-692-431-21	SWITCH, TACTILE			
S1977		1-692-431-21	SWITCH, TACTILE			
S1978		1-692-431-21	SWITCH, TACTILE			
**********						
	*	A-1388-332-A	J BOARD MOUNTED			
			**********			
			<CAPACITOR>			
C2410		1-126-967-11	ELECT	47UF	20.00%	50V
C2411		1-126-967-11	ELECT	47UF	20.00%	50V
C2412		1-126-967-11	ELECT	47UF	20.00%	50V
C2413		1-102-112-00	CERAMIC	330PF	10.00%	50V
C2414		1-102-112-00	CERAMIC	330PF	10.00%	50V
C2418		1-126-960-11	ELECT	1UF	20.00%	50V
C2419		1-126-960-11	ELECT	1UF	20.00%	50V
			<CONNECTOR>			
CN2410	*	1-564-523-11	PLUG, CONNECTOR 8P			
			<DIODE>			
D2410		8-719-929-15	HZS9.1NB2			
D2411		8-719-929-15	HZS9.1NB2			
D2412		8-719-929-15	HZS9.1NB2			
D2414		8-719-929-15	HZS9.1NB2			
D2415		8-719-929-15	HZS9.1NB2			
			<JACK>			
J2410		1-784-623-11	BLOCK, PIN JACK 5P			
			<RESISTOR>			
R2410		1-247-804-11	CARBON	75	5%	1/4W
R2411		1-247-804-11	CARBON	75	5%	1/4W
R2412		1-247-804-11	CARBON	75	5%	1/4W
R2414		1-247-887-00	CARBON	220K	5%	1/4W
R2415		1-247-807-31	CARBON	100	5%	1/4W
R2417		1-247-887-00	CARBON	220K	5%	1/4W
R2418		1-247-807-31	CARBON	100	5%	1/4W
R2419		1-249-409-11	CARBON	220	5%	1/4W
R2420		1-249-409-11	CARBON	220	5%	1/4W
R2421		1-249-409-11	CARBON	220	5%	1/4W
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V2 VM

REF NO.	PART NO.	DESCRIPTION			REMARK
	* A-1347-165-A	V2 BOARD COMPLETE			
		**********			
		<CAPACITOR>			
C5801	1-126-947-11	ELECT	47UF	20.00%	16V
C5805	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C5806	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C5814	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C5815	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C5816	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C5817	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C5818	1-163-239-11	CERAMIC CHIP	33PF	5.00%	50V
C5820	1-163-239-11	CERAMIC CHIP	33PF	5.00%	50V
C5821	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C5822	1-163-009-91	CERAMIC CHIP	0.001UF	10.00%	50V
C5823	1-126-933-11	ELECT	100UF	20.00%	16V
C5826	1-126-963-11	ELECT	4.7UF	20.00%	50V
C5830	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C5831	1-126-924-11	ELECT	330UF	20.00%	6.3V
		<CONNECTOR>			
CN5801	1-793-496-11	CONNECTOR, BOARD TO BOARD 20P			
		<DIODE>			
D5802	8-719-914-44	DAP202K			
D5803	8-719-105-46	RD3.3M-B2			
		<FERRITE BEAD>			
FB5801	1-410-397-21	FERRITE	1.1UH		
FB5802	1-410-397-21	FERRITE	1.1UH		
FB5803	1-410-397-21	FERRITE	1.1UH		
FB5804	1-414-223-11	INDUCTOR	470UH		
		<IC>			
IC5801	8-759-476-87	SAA5261			
		<CHIP CONDUCTOR>			
JR5801	1-216-295-91	SHORT	0		
JR5804	1-216-295-91	SHORT	0		
JR5805	1-216-295-91	SHORT	0		
		<COIL>			
L5800	1-412-537-31	INDUCTOR	100UH		
		<TRANSISTOR>			
Q5801	8-729-120-28	2SC1623-L5L6			
Q5803	8-729-120-28	2SC1623-L5L6			
Q5806	8-729-120-28	2SC1623-L5L6			
Q5807	8-729-120-28	2SC1623-L5L6			
Q5808	8-729-120-28	2SC1623-L5L6			
Q5810	8-729-120-28	2SC1623-L5L6			
Q5817	8-729-026-49	2SA1037AK-T146-R			

REF NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R5800	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R5801	1-216-295-91	SHORT	0		
R5802	1-216-025-11	RES-CHIP	100	5%	1/10W
R5803	1-216-295-91	SHORT	0		
R5821	1-216-083-00	RES-CHIP	27K	5%	1/10W
R5822	1-216-025-11	RES-CHIP	100	5%	1/10W
R5824	1-216-295-91	SHORT	0		
R5825	1-216-295-91	SHORT	0		
R5827	1-216-295-91	SHORT	0		
R5828	1-216-025-11	RES-CHIP	100	5%	1/10W
R5829	1-216-025-11	RES-CHIP	100	5%	1/10W
R5830	1-216-295-91	SHORT	0		
R5831	1-216-295-91	SHORT	0		
R5832	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R5835	1-216-295-91	SHORT	0		
R5839	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R5841	1-216-025-11	RES-CHIP	100	5%	1/10W
R5842	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5843	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5845	1-216-017-91	RES-CHIP	47	5%	1/10W
R5846	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5847	1-216-037-00	RES-CHIP	330	5%	1/10W
R5848	1-216-027-00	RES-CHIP	120	5%	1/10W
R5849	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5857	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5860	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5861	1-216-025-11	RES-CHIP	100	5%	1/10W
R5863	1-216-025-11	RES-CHIP	100	5%	1/10W
R5879	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5880	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5882	1-216-025-11	RES-CHIP	100	5%	1/10W
R5884	1-216-025-11	RES-CHIP	100	5%	1/10W
R5885	1-216-025-11	RES-CHIP	100	5%	1/10W
R5886	1-216-041-00	RES-CHIP	470	5%	1/10W
R5887	1-216-027-00	RES-CHIP	120	5%	1/10W
R5888	1-216-037-00	RES-CHIP	330	5%	1/10W
R5889	1-216-037-00	RES-CHIP	330	5%	1/10W
R5890	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5891	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5893	1-216-027-00	RES-CHIP	120	5%	1/10W
		<CRYSTAL>			
X5801	1-578-774-11	VIBRATOR, CRYSTAL			

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	* A-1342-570-A	VM BOARD MOUNTED			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C5401	1-126-935-11	ELECT	470UF	20.00%	16V
C5402	1-137-194-81	FILM	0.47UF	5.00%	50V
C5403	1-126-935-11	ELECT	470UF	20.00%	6.3V
C5405	1-126-933-11	ELECT	100UF	20.00%	16V
C5406	1-126-935-11	ELECT	470UF	20.00%	6.3V

VM

REF NO.	PART NO.	DESCRIPTION		REMARK	
C5407	1-107-364-11	MYLAR	0.01UF	10.00%	200V
C5408	1-107-364-11	MYLAR	0.01UF	10.00%	200V
C5409	1-107-649-11	ELECT	2.2UF	20.00%	250V
C5410	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C5411	1-130-471-00	MYLAR	0.001UF	5.00%	50V
C5412	1-126-935-11	ELECT	470UF	20.00%	16V
C5413	1-107-648-91	ELECT	100UF	20.00%	160V
C5415	1-104-999-11	MYLAR	0.1UF	10.00%	200V
C5417	1-101-821-00	CERAMIC	0.0022UF		500V
C5418	1-107-638-11	ELECT	33UF	20.00%	160V
		<CONNECTOR>			
CN5401 *	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P			
CN5402	1-764-334-11	PLUG, CONNECTOR 11P			
		<DIODE>			
D5400	8-719-911-19	1SS119-25			
D5401	8-719-510-02	D1NS4			
D5402	8-719-911-19	1SS119-25			
D5403	8-719-911-19	1SS119-25			
D5404	8-719-911-19	1SS119-25			
D5405	8-719-110-56	RD22ES-B1			
D5406	8-719-110-56	RD22ES-B1			
		<COIL>			
L5400	1-412-525-31	INDUCTOR	10UH		
		<TRANSISTOR>			
Q5400	8-729-119-78	2SC2785-HFE			
Q5401	8-729-119-78	2SC2785-HFE			
Q5402	8-729-119-78	2SC2785-HFE			
Q5403	8-729-119-78	2SC2785-HFE			
Q5404	8-729-119-76	2SA1175-HFE			
Q5405	8-729-119-76	2SA1175-HFE			
Q5406	8-729-045-05	2SA2005			
Q5407	8-729-045-04	2SC5511			
		<RESISTOR>			
R5401	1-249-425-11	CARBON	4.7K	5%	1/4W
R5402	1-249-415-11	CARBON	680	5%	1/4W
R5403	1-247-739-11	CARBON	100	5%	1/2W
R5404	1-249-418-11	CARBON	1.2K	5%	1/4W
R5406	1-249-425-11	CARBON	4.7K	5%	1/4W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R5407	1-249-401-11	CARBON	47	5%	1/4W
R5408	1-247-807-31	CARBON	100	5%	1/4W
R5409	1-249-409-11	CARBON	220	5%	1/4W
R5410	1-249-401-11	CARBON	47	5%	1/4W
R5411	1-249-401-11	CARBON	47	5%	1/4W
R5412	1-249-429-11	CARBON	10K	5%	1/4W
R5413	1-249-414-11	CARBON	560	5%	1/4W
R5414	1-249-432-11	CARBON	18K	5%	1/4W
R5415	1-247-739-11	CARBON	100	5%	1/2W
R5416	1-249-385-11	CARBON	2.2	5%	1/4W
R5417	1-249-432-11	CARBON	18K	5%	1/4W
R5418	1-249-414-11	CARBON	560	5%	1/4W
R5419	1-249-421-11	CARBON	2.2K	5%	1/4W
R5420	1-249-421-11	CARBON	2.2K	5%	1/4W
R5421	1-249-385-11	CARBON	2.2	5%	1/4W
R5422	1-249-405-11	CARBON	100	5%	1/4W
R5423	1-215-915-11	METAL OXIDE	470	5%	3W
R5424	1-249-395-11	CARBON	15	5%	1/4W
R5425	1-249-401-11	CARBON	47	5%	1/4W
R5427	1-249-395-11	CARBON	15	5%	1/4W

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ACCESSORIES AND PACKING MATERIALS
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	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
*	4-029-168-01	BAG, PROTECTION
	4-065-210-01	JOINT
*	4-076-402-02	CUSHION (LOWER)(ASSY)
*	4-076-405-02	CUSHION (UPPER)(ASSY)
*	4-076-408-02	INDIVIDUAL CARTON
*	4-076-409-02	TRAY
	4-078-366-42	MANUAL INSTRUCTION
	4-392-003-11	BAND, HOLD
	4-392-004-11	CLIP

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REMOTE COMMANDER
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	1-476-292-11	REMOTE COMMANDER (RM-964)
	9-933-895-11	BATTERY COVER REMOTE COMMANDER

Sony Corporation
Sony Technology Malaysia Sdn. Bhd.
Visual Products General Area

9-872-267-01

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